

ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

36 CFR Part 1191

[Docket No. 98-5]

RIN 3014-AA16

Americans With Disabilities Act Accessibility Guidelines; Recreation Facilities

AGENCY: Architectural and
Transportation Barriers Compliance
Board.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Architectural and Transportation Barriers Compliance Board (Access Board) proposes to amend the Americans with Disabilities Act Accessibility Guidelines (ADAAG) by adding a new special application section for newly constructed and altered recreation facilities that are not adequately addressed by the existing guidelines. The new section covers amusement rides, boating facilities, fishing piers and platforms, golf courses, miniature golf, exercise equipment and machines, bowling lanes, shooting ranges, swimming pools, wading pools, and spas. The proposed rule also amends several existing ADAAG provisions to specifically address certain recreation facility features and adds provisions for saunas and steam rooms, and benches. Finally, the proposed rule adds a provision for boat and ferry docks. The amendments will ensure that newly constructed and altered recreation facilities are readily accessible to and usable by individuals with disabilities.

DATES: Comments should be received by November 8, 1999. The Access Board will hold a public hearing on the proposed rule on August 26, 1999 from 9:00 a.m. to 3:00 p.m.

ADDRESSES: Comments should be sent to the Office of Technical and Information Services, Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW., suite 1000, Washington, DC 20004-1111. Fax number (202) 272-5447. E-mail comments should be sent to recreate@access-board.gov. Comments sent by e-mail will be considered only if they include the full name and address of the sender in the text. Comments will be available for inspection at the above address from 9:00 a.m. to 5:00 p.m. on regular business days.

The public hearing will be held at the Hyatt Regency, 300 Reunion Boulevard in Dallas, Texas. Interested members of

the public may contact the Board at (202) 272-5434 extension 18 or (202) 272-5449 (TTY) to preregister to give testimony or may register on the day of the hearing.

FOR FURTHER INFORMATION CONTACT:

Peggy Greenwell, Office of Technical and Information Services, Architectural and Transportation Barriers Compliance Board, 1331 F Street, NW., suite 1000, Washington, DC 20004-1111. Telephone number (202) 272-5434 extension 34 (Voice); (202) 272-5449 (TTY). These are not toll-free numbers. E-mail address:

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SUPPLEMENTARY INFORMATION:

Availability of Copies and Electronic Access

Single copies of this publication may be obtained at no cost by calling the Access Board's automated publications order line (202) 272-5434, by pressing 1 on the telephone keypad, then 1 again, and requesting publication S-37 (Recreation Facilities Notice of Proposed Rulemaking). Persons using a TTY should call (202) 272-5449. Please record a name, address, telephone number and request publication S-37. This document is available in alternate formats upon request. Persons who want a copy in an alternate format should specify the type of format (cassette tape, Braille, large print, or computer disk). This document is also available on the Board's Internet site (<http://www.access-board.gov/rules/recnprm.htm>).

Background

The Americans with Disabilities Act (ADA) (42 U.S.C. 12101 *et seq.*) is a comprehensive civil rights law that prohibits discrimination on the basis of disability and requires, among other things, that newly constructed and altered State and local government buildings and facilities, places of public accommodation, and commercial facilities be readily accessible to and usable by individuals with disabilities. The Architectural and Transportation Barriers Compliance Board (Access Board) ¹ is responsible for developing

¹ The Access Board is an independent Federal agency established by section 502 of the Rehabilitation Act (29 U.S.C. 792) whose primary mission is to promote accessibility for individuals with disabilities. The Access Board consists of 25 members. Thirteen are appointed by the President from among the public, a majority of who are required to be individuals with disabilities. The other twelve are heads of the following Federal agencies or their designees whose positions are Executive Level IV or above: The departments of Health and Human Services, Education, Transportation, Housing and Urban Development, Labor, Interior, Defense, Justice, Veterans Affairs,

accessibility guidelines for newly constructed and altered buildings and facilities subject to the ADA. The Access Board initially issued the Americans with Disabilities Act Accessibility Guidelines (ADAAG) (36 CFR part 1191) in 1991.² The ADA requires the Department of Justice and the Department of Transportation to publish regulations that include design standards for newly constructed and altered buildings and facilities that are consistent with ADAAG.³

ADAAG contains scoping provisions and technical specifications for designing parking areas, entrances, toilet rooms and other elements and spaces that typically comprise a building and its site so that individuals with disabilities will have ready access to and use of the facility. ADAAG also contains special application sections for certain types of facilities, including restaurants, medical care facilities, business and mercantile establishments, libraries, transient lodging, and transportation facilities. ADAAG was amended in 1998 to add special application sections for certain State and local government facilities, including judicial, legislative and regulatory facilities, and detention and correction facilities.

Various types of recreation facilities are covered by the ADA. The Access Board is now proposing to amend several existing sections of ADAAG and to add a new special application section to address the unique features of recreation facilities that are not adequately addressed by the current guidelines. The ADA covers a wide variety of recreation facilities such as boating and fishing facilities, golf courses, parks, places of amusement, play areas, sports facilities, and trails. In

and Commerce; General Services Administration; and United States Postal Service.

² Existing buildings and facilities, while subject to certain ADA requirements, are not addressed by ADAAG except where altered. Section 4.1.6 of the 1991 ADAAG contains the provisions relating to alterations. Generally, each altered element and space is required to comply with new construction technical specifications unless technically infeasible. If alterations are made to an area containing a primary function area, an accessible path of travel is required to the altered area to the extent that the cost is not disproportionate to the cost of the overall alteration as determined under regulations issued by the Department of Justice. For the Department of Justice's regulations on alterations to a primary function area, see 28 CFR 36.403.

³ The ADA Standards for Accessible Design published by the Department of Justice (28 CFR part 36, Appendix A) are based on the 1991 ADAAG. Newly constructed and altered recreation facilities covered by the ADA must comply with the ADA Standards for Accessible Design to the extent that the standards apply to the facility (e.g., parking areas, accessible routes, entrances, toilet rooms, restaurants, mercantile establishments).

July 1993, the Access Board convened a Recreation Access Advisory Committee as the first step in developing these guidelines. The committee was comprised of owners and operators of recreation facilities; persons who design recreation facilities or manufacture related equipment; local, State and Federal officials responsible for parks and other outdoor developed areas; and individuals with disabilities and organizations representing their interests. The committee was requested to accomplish the following objectives:

- Develop a list of the various types of recreation facilities;
- Identify the features of each facility type that are not adequately addressed by ADAAG;
- Consider any unique design issues or constraints affecting access to each facility type;
- Review any existing voluntary guidelines for providing access to the various facility types; and
- Make recommendations for accessibility guidelines for each facility type.

The committee organized itself into six subcommittees based on facility types to accomplish these objectives: places of amusement; boating and fishing facilities; golf; play areas; sports facilities; and outdoor developed areas. The committee met five times between July 1993 and May 1994. Committee members spent most of their time working in subcommittees which reported to the full committee. The subcommittees also worked between committee meetings. Committee meetings were well attended by persons interested in the committee's work and public comment was received at each meeting. The subcommittees also encouraged interested persons to participate in their work, including providing information and reviewing draft reports. More than 250 people actively participated in the committee and subcommittee's work and collectively gave between 50,000 and 60,000 hours of their time. In July 1994, the committee formally presented its report and recommendations to the Access Board. The committee's recommendations represented the consensus of the members of each subcommittee, and not necessarily the full committee. Because of this, this notice refers to recommendations made by the subcommittee which examined particular facilities.

After receiving the committee's report, the Access Board published an Advance Notice of Proposed Rulemaking (ANPRM) requesting public comment on the recommendations. 59 FR 48542 (September 21, 1994). More

than 600 comments were received on the recommendations contained in the report. Overall, the comments were supportive of the committee's recommendations. However, public comment revealed a lack of a consensus on some major issues regarding the committee's recommendations for play areas and outdoor developed areas (i.e., trails, camping and picnic facilities, and beaches). There was also a need to gain additional input from some groups that had not been involved in the committee's work. For these reasons, the Board elected to use a regulatory negotiation process to develop proposed rules for play areas and outdoor developed areas. In February 1996, the Board established a regulatory negotiation committee on play areas. That committee met seven times, and the Board published a notice of proposed rulemaking on April 30, 1998 (63 FR 24080). In June 1997, the Board established a regulatory negotiation committee on outdoor developed areas. That committee will present a report to the Board in September 1999.

Using the Recreation Access Advisory Committee's recommendations, the Board has developed proposed accessibility guidelines addressing amusement rides, boating facilities, fishing piers and platforms, golf courses, miniature golf, sports facilities, swimming pools, wading pools, and spas. There were some areas where the Board needed additional information. For example, the Board sponsored a research project on swimming pool access to gather information. In other areas, the Board believed that existing ADAAG adequately addressed an element and as a result has not repeated or included the provisions in this proposed rule. Finally, there are areas that the Board has not addressed in this proposed rule. For example, accessibility guidelines for ski areas have not been proposed. The Board will continue to monitor and gather information in this and other areas for potential future rulemaking.

The Board also is responsible for establishing accessibility guidelines for federally financed facilities covered by the Architectural Barriers Act (42 U.S.C. 4151 *et seq.*), including facilities constructed or altered by Federal agencies. Since Federal agencies own or operate many of the same type of recreational facilities addressed by this proposed rule, the Board plans to take action at a future date to make the provisions applicable to federally financed facilities pursuant to the Architectural Barriers Act. Federal agencies and other interested persons are encouraged to comment on this

proposed rule and how the provisions will affect recreational facilities owned or operated by the Federal government.

Section-by-Section Analysis

This section of the preamble contains a concise summary of the proposed rule. The proposed rule amends several existing sections of ADAAG and adds a new special application section. For purposes of the section by section analysis, the proposed amendments to the existing sections of ADAAG and the new special application section are summarized by type of facility.

Amusement Rides

3.5 Definitions

This section defines terms used in the proposed rule. Terms and definitions established within the industry have been used to the greatest extent possible.

The term "amusement device" means a device that moves persons through a fixed course within a defined area for amusement or entertainment purposes. Additionally, the definition specifies that the rider does not control or operate an amusement device.

The term "amusement ride" is defined as a system containing one or more amusement devices that provide the same general amusement experience.

Question 1: The proposed rule does not address amusement attractions without seats such as walk-through fun houses, mazes, or barrels. Additionally, the proposed rule does not address amusement rides where the patron has control over the ride, such as go-carts and bumper boats. The Board is considering developing guidelines for these types of amusement rides and attractions. Specific information regarding the unique characteristics of these rides and how persons with disabilities have accessed these rides is requested.

4.1.3(19)(a) Exception

ADAAG 4.1.3(19)(a) requires a specific number of wheelchair spaces in an assembly area, based on the number of seats. An exception is proposed to allow the installation of transfer seats instead of wheelchair spaces, where the motion of fixed seats is an integral part of an amusement experience. This exception applies only to fixed seats in amusement facilities. Some seats in amusement attractions, such as flight simulators, may provide motion as an integral part of the amusement experience. Where seats move independent of the user, transfer seats may enhance the user's amusement experience.

15.1 Amusement Rides

The proposed guidelines apply to permanent amusement rides and devices with fixed seats that are set up for a long duration and are not regularly assembled and disassembled (e.g., rides in amusement parks and theme parks). They do not apply to amusement rides and devices set up for a short period and assembled and disassembled regularly (e.g., rides that are part of traveling carnivals, State and county fairs, festivals, and other special events). However, itinerant amusement rides and devices are covered by the ADA when they are provided by a public entity or a public accommodation. The obligations of covered entities operating itinerant amusement rides and devices are established by the Department of Justice ADA regulations.

15.1.1 Number Required

This section applies to amusement rides with amusement devices containing fixed seats. One wheelchair space complying with 15.1.3 is required per 100 fixed seats, or fraction thereof, on each amusement ride. In addition, one transfer seat complying with 15.1.4 must be provided per 100 fixed seats, or fraction thereof, on each amusement ride. Unlike other assembly seats, amusement ride devices cycle frequently (between ninety seconds and fifteen minutes). Each device accommodates a high volume of people due to its short cycles. Requiring wheelchair spaces and transfer seats will provide more choice and options for integrated seating.

The places of amusement subcommittee recommended that at least one wheelchair space and at least one transfer seat be provided on an amusement ride. They recommended that where a ride is comprised of three cars, for example, one wheelchair space and one transfer seat should be provided on one of the three cars. The Board has based the requirement for wheelchair spaces and transfer seats on the number of fixed seats provided on each ride. Given the diversity of amusement rides, this approach is intended to simplify the requirement.

15.1.1 Exception

This exception permits the use of an additional transfer seat instead of the required wheelchair space, where it is not operationally or structurally feasible to provide wheelchair spaces. For purposes of this section, feasibility is not to be determined by the cost of providing a wheelchair space. Amusement rides must be readily accessible to and usable by individuals

with disabilities, including individuals who use wheelchairs. A determination that it is operationally or structurally infeasible should be based on an engineering analysis that demonstrates that placing a wheelchair on a ride would have a significant adverse effect on the structural integrity of either the mobility device or the amusement device. For example, some wheelchairs may not be designed to withstand the forces that are a part of a ride. The places of amusement subcommittee suggested that accommodating a person in a wheelchair on an amusement device may not be feasible on a looping roller coaster, for example, because the use of a wheelchair may raise a person's center of gravity and impact the dynamic forces of a ride. A wheelchair may also create instability on a raft ride. Designers should think about how to provide a wheelchair space on a ride from the conceptual phase onward. If a designer determines at some point that it is not operationally or structurally feasible to do so, the guidelines do not require any specific documentation. However, the designer should be prepared to explain the basis for the determination if any questions arise about the use of the exception.

15.1.1.1 Dispersion

This section requires that accessible amusement devices be dispersed throughout an amusement ride. Where different types of amusement devices are provided, accessible devices are required to be dispersed among the different types.

15.1.2 Accessible Loading and Unloading Areas

This provision requires an accessible route to connect the portion of the loading and unloading area serving each accessible amusement device. The loading and unloading area serving each accessible amusement device must provide a level maneuvering space complying with ADAAG 4.2.3. This section permits loading and unloading in the same area. This reduces the need to move a wheelchair or other mobility device from the load area to the unload area.

15.1.2.1 Wheelchair Storage Space

This provision requires a wheelchair storage space complying with ADAAG 4.2.4 to be provided in the unloading area for each required transfer seat. For example, if a ride provides 200 fixed seats, two transfer seats would be required. Thus, two wheelchair storage spaces would also be required. Wheelchair storage spaces are necessary so that individuals who transfer from

their wheelchair to a ride device will have a place to leave their wheelchair. The wheelchair storage spaces cannot overlap any required means of egress or required accessible routes.

15.1.2.2 Signage

This provision requires amusement rides to provide signs at the entrance of queues and waiting lines to identify whether the accessible amusement devices provide wheelchair spaces, transfer seats, or both. Where an accessible unload area is coincident with the accessible load area, the ride must provide signs at the entrance to the queue or waiting line showing the location of the accessible load and unload area. Signage will provide important information to people with disabilities regarding the type of access provided (i.e., roll-on or transfer) and the location of the accessible loading area. Since not every person can transfer from a wheelchair or mobility device, signs will reduce unnecessary backtracking.

15.1.2.3 Loading and Unloading

This provision requires the height of loading and unloading areas to be coordinated with the floor height of an amusement device. When an amusement device is at rest, the vertical difference between the floor height of the loading and unloading area and the floor height of the amusement ride device must be within plus or minus $\frac{5}{8}$ inches under normal passenger load conditions. The horizontal gap between the amusement ride device and the edge of the loading and unloading area must be no greater than 3 inches. These changes in level are consistent with the rail-to-platform height required in ADAAG 10.3.1(9) (Fixed Transportation Stations).

15.1.2.3 Exception

This exception permits the use of ramps, bridge plates, or similar manually deployed devices complying with the applicable requirements of 36 CFR 1192.83, where it is not operationally or structurally feasible to meet the horizontal or vertical difference requirements between amusement ride devices and loading and unloading areas. The technical requirements for ramps and bridge plates are based on the provisions for light rail vehicles. For purposes of this section, feasibility is not to be determined by the cost of providing access where there are horizontal or vertical differences. An engineering analysis, however, may demonstrate that eliminating the horizontal or vertical difference between the ride

device and the loading and unloading areas would have a significant adverse effect. Gaps between the amusement ride device and the load and unload areas are necessary to protect patrons from potential pinching. Amusement ride devices with more complicated suspensions may also be unable to meet the access requirements and allow for the safe movement of the amusement ride device. If a designer determines that it is not operationally or structurally feasible to meet the horizontal or vertical difference requirements between the amusement ride device and the loading and unloading area, the guidelines do not require any specific documentation. However, the designer should be prepared to explain the basis for the determination if any questions arise about the use of the exception.

15.1.3 Wheelchair Space

This section contains technical provisions for wheelchair spaces on accessible amusement devices.

15.1.3.1 Floor or Ground Surface

This section requires floor or ground surfaces to be level. Additionally, wheelchair spaces must comply with ADAAG 4.5.1, 4.5.3 and 4.5.4. These sections address surface characteristics, carpet, and gratings. This section is consistent with other ADAAG provisions for wheelchair spaces in assembly areas.

15.1.3.2 Width

This section requires a wheelchair space to be 36 inches minimum in width. A 36 inch width is required, as opposed to 30 inches, because of the confined spaces often found on amusement devices. This is consistent with the maneuvering clearances required by ADAAG 4.2.4 for alcoves.

15.1.3.3 Depth

This section requires that where a wheelchair space can be entered from the front or rear, the wheelchair space must be 48 inches minimum in depth. Where a wheelchair space can be entered only from the side, the wheelchair space must be 60 inches minimum in depth.

15.1.3.4 Approach

This section requires that at least one side of the wheelchair space adjoin an accessible route.

15.1.3.5 Fixed Companion Seats

This section requires that where amusement devices provide seating for more than one rider, a fixed companion seat must be provided for each required

wheelchair space. Where amusement devices provide shoulder to shoulder seating, companion seats must be shoulder to shoulder with the adjacent wheelchair space. For example, where an amusement device provides single seating in the front and rear of a device, the companion seating is not required to be positioned shoulder to shoulder with the wheelchair space. Where a ride provides seating for more than one rider sitting shoulder to shoulder, the wheelchair space and required companion seating must also be aligned shoulder to shoulder.

15.1.4 Transfer Seat

This section contains technical provisions for transfer seats on accessible amusement devices. Some of the provisions may be consistent with current design practices. The places of amusement subcommittee recommended technical provisions for a diagonal approach, side approach, and other special transfer provisions. The Board has proposed provisions for side transfers only, because in many cases one transfer seat will be provided and a side transfer will be accessible to the greatest range of individuals with disabilities.

15.1.4.1 Clear Floor Space

This section requires a clear space complying with ADAAG 4.2.4.1 to be provided with the longer dimension parallel to the unobstructed side of the transfer seat and to be located within 3 inches maximum of the transfer seat. A clear space allows space for a stationary wheelchair adjacent to the transfer seat. The clear floor space must extend 12 inches beyond the back of the seat so that the rear wheels of a wheelchair do not obstruct a person's transfer.

15.1.4.2 Maneuvering Space

This section permits the maneuvering space required by 15.1.2 to overlap the clear floor space serving transfer seats. This is consistent with existing ADAAG requirements.

15.1.4.3 Transfer Seat Dimensions and Position

This section requires the height of transfer seats to be 17 inches minimum to 19 inches maximum above the load and unload platform. The end of the transfer seat adjacent to the clear floor space complying with 15.1.4.1 must be unobstructed when in the load or unload position to permit transfer. The places of amusement subcommittee recommended a height of 15 to 19 inches to address the needs of children. The proposed guidelines are largely based on adult dimensions. As a result,

the 17 to 19 inch range, which is consistent with other elements designed for transfer (ADAAG 4.16 and ADAAG 4.21), has been proposed. ADAAG 2.2 permits equivalent facilitation. This means that departures from these proposed provisions will be permitted, provided that alternative designs and technologies used provide substantially equivalent or greater access to and usability of the amusement ride. If, for example, an amusement ride is to be used primarily by children, a lower transfer seat height may be appropriate.

15.1.4.4 Transfer Entry

This section requires that, when in the load and unload position, an amusement device provide a 36 inch wide minimum entry. The entry must provide an opening and be positioned parallel to the longer dimension of the clear floor space.

Question 2: The places of amusement subcommittee indicated that on certain amusement devices, transfer access may not be possible. Examples included amusement devices in flumes and pools where the pool sides must be higher than the amusement devices. Also, in some water rides, water levels must be kept lower than the loading areas. Are there other amusement devices with seats where it is not operationally or structurally feasible to design the amusement device to provide transfer seats? The Board is interested in specific information on why such amusement devices cannot be designed to provide transfer seats. The Board requests comments on how ADAAG should address amusement devices where transfer access cannot be provided. The Board also requests comments on the impact of providing a wheelchair space and a transfer seat on permanent amusement rides with a small number of fixed seats.

Question 3: The Board has examined issues related to providing an accessible route connecting accessible elements on sites used for fairs, carnivals, and other itinerant places of amusement. In many circumstances, a site such as a field or parking lot may be used for a short period of time. Where the site is altered to provide a route to serve the temporary elements, ADAAG accessible route provisions apply. This requires, among other things, for the surface to be stable, firm, and slip-resistant and to have a conforming slope. The places of amusement subcommittee recommended that fairs, carnivals, and other itinerant places of amusement provide a modified accessible route to connect temporary elements. The Board requests comments on how to address the issue of accessible routes in itinerant

places of amusement. When a site is altered to provide a route to serve temporary elements, should the route be required to meet the technical provisions of ADAAG 4.3? If not, how should such routes be treated? What factors should be considered in determining when it is appropriate to depart from the technical provisions for an accessible route?

Question 4: The proposed rule does not contain any requirement for access to water slides. The Board requests comment on this issue.

Boating Facilities

3.5 Definitions

This section defines terms used in the proposed rule.

The term "boat launch ramp" is defined as a sloped surface designed for the launching and retrieval of trailered boats to and from the water.

The term "boat slip" is defined as the area where a boat is tied to a dock or pier for the purpose of embarking or disembarking.

The term "design high point" means a selected elevation, based on hydrologic data and other appropriate records, that is used as a safe and practical upper limit for the design and construction of a gangway to a floating facility. The term is necessary for establishing a vertical measurement to the water level. Designers have some discretion in determining the high point based on this information. The Board has combined the design high point with other factors to determine gangway slopes.

The term "gangway" is defined as a variable-sloped structure linking a fixed structure or land with a floating structure.

10.5 Boat and Ferry Docks

This section requires that boat and ferry docks comply with 15.2. The Board added a special application section for transportation facilities (section 10) to ADAAG in 1991. However, provisions to address access to floating boat and ferry docks were not yet developed and section 10.5 was reserved. This section applies the provisions contained in 15.2 to boat and ferry docks covered by 10.5.

15.2 Boating Facilities

This section applies to each boating facility provided within a site and requires compliance with the applicable provisions of 15.2. A boating facility can contain one or more piers and the same facility can also include one or more boat launch ramps. In some cases, such as a State park with a large lake, a site

may contain more than one boating facility. In other cases, several boating facilities may be located in the same waterfront area, each operated by different operators. The provisions of 15.2 apply to each boating facility.

15.2.1 Gangways

This section requires that gangways which are part of an accessible route comply with ADAAG 4.3. Gangways are permitted to have transition plates at the top and bottom.

At boating facilities, gangways function as bridges that link land or fixed structures with floating piers. As water levels rise and fall, the gangway slopes also rise and fall. Sometimes the changes may be very gradual over a period of weeks or months, and in other cases dramatic changes occur over a few hours. Often, the land sides of gangways are hinged to fixed structures with the pier sides left free to move across the pier surfaces as the slope of the gangway changes. Rollers are sometimes attached to the pier end to allow the gangway to adjust freely as the slope changes. These rollers can produce changes in level between the walking surface at the end of the gangway and the walking surface of the floating pier. Other friction reducing aids and the framing that forms the structural supports of the gangway can produce changes in level. Sometimes, neither end of the gangway is hinged and a change in level occurs at both ends.

Where the slope of an accessible route exceeds 1:20, ADAAG 4.3.7 requires the sloping surface to comply with ADAAG 4.8 (Ramps). ADAAG 4.8 requires level landings at the top and bottom of each ramp segment. Because of the changing water levels and the varying slopes of gangways, the boating and fishing subcommittee recognized the difficulty in providing level landings. Proposed 15.2.1 permits the use of transition plates at the top and bottom of a gangway. Transition plates are often constructed of metal and are used to connect the ends of a gangway to a boarding dock. The boating and fishing facilities subcommittee recommended that transition plates be allowed at the ends of gangways and that these transition plates have slopes less than or equal to 1:12 (8.33 percent).

15.2.1 Exceptions 1 and 2

Exception 1 proposes that the maximum rise requirements of ADAAG 4.8.2 not apply to gangways. In addition, exception 2 proposes that gangways be permitted to exceed the 1:12 maximum slope specified by ADAAG 4.8.2, when the vertical distance between the design high point

and the level of the water exceeds the vertical distance specified in the left hand column of Table 15.2.1 and the square footage of fixed and floating piers at the facility is less than the square footage specified in the right hand column of Table 15.2.1.

One of the most difficult issues relating to accessibility in boating facilities is the issue of gangway slopes. Bodies of water fluctuate due to rainfall, snow melting, droughts, reservoir draw downs, surge effects, tidal forces, flood control, and other factors. Fluctuations can range from less than 12 inches to changes of more than 40 feet, and sometimes, several hundred feet with reservoir impoundments. Changes can occur rapidly over a few hours or gradually over an operating season. Overall, boating and fishing facilities subcommittee members agreed that under some circumstances, the slope of a gangway could exceed the maximum 1:12 slope allowed for ramps by ADAAG 4.8.2. The boating and fishing facilities subcommittee recommended three options for gangway slopes.

Option 1 recommended that where water level changes do not exceed 5 feet during the operating season, gangways should comply with ADAAG 4.3. The boating and fishing facilities subcommittee noted that additional information was needed to recommend design standards where water level changes exceed 5 feet.

Option 2, primarily based on recommendations made by the States Organization for Boating Access, recommended that gangways be allowed to be 60 feet long before a level landing is required. It also recommended that gangways located in areas with annual water fluctuations of zero to 5 feet should have slopes that do not exceed 1:12, the maximum permitted by ADAAG 4.8.2. In areas with annual water fluctuations of 5 feet or more during 92 percent of the operating season, the slope of the gangway should not exceed 1:12.

Option 3 recommended that an accessible route be provided to at least one of each type of boating activity in recreational boating facilities. A gangway connecting an accessible dock or pier should comply with ADAAG 4.3 during all operating hours of a facility. Boating and fishing facilities subcommittee members also noted that additional information was needed to determine when exceptions to ADAAG 4.3 should apply.

A substantial majority of commenters to the ANPRM supported option 2. Most supporters of option 2 agreed with allowing the gangway to be 60 feet long. However, a substantial number of

commenters did not support the 92 percent requirement and recommended that the percentage should be closer to 50 percent.

The Board determined that further information and cost data was necessary to develop a slope requirement for gangways. In 1996, the Board completed a study to develop design solutions and general cost estimates for providing access to floating boating facilities. The study found that there was a relationship between the cost of compliance with ADAAG 4.3 and water level change. Costs of providing gangway ramping systems conforming to ADAAG 4.3 ranged from \$10,000 for a 30 inch water level change to \$450,000 for a 30 foot water level change. Cost estimates included fabrication, delivery, and placement of a gangway in the water, but excluded configuration and mooring system costs. The study also indicated that price bids in a competitive marine environment can easily vary up to 50 percent above or below engineers' estimates.

As the range of water level changes increases, so does the complexity of the structures designed to provide access. In one example provided in the Board's study, a design was provided to access a 12.5 foot change in water level while still complying with existing ADAAG requirements. The design included three ramps on land, four on a floating structure, and two 64 foot gangways. Because ADAAG 4.8.2 limits the rise of a ramp run to 30 inches, the design increased the gangway length so that the slopes never exceeded 1:20. The estimated cost for this gangway ramping system was more than \$200,000.

The study also evaluated the use of elevators and platform lifts and reported that in the 30 inch to 30 foot range, gangway ramp systems could be half as expensive as lift or elevator-based systems. It was also noted that there are maintenance difficulties in operating mechanical devices such as platform lifts and elevators in saltwater environments.

The Board recognizes that the interface between land and water environments is often very dynamic and constraints exist which cannot be easily resolved. Waterside restrictions include limits on how far piers may project from shore lines into navigable channels. For small facilities, such as a bait shop with a floating pier capable of mooring a few row boats, the cost of providing a gangway conforming to ADAAG 4.3 could become economically infeasible as the change in water level increases. However, for large facilities, such as a 1000-slip marina, conformance to

ADAAG 4.3 would be feasible even as the change in water level increases.

In an attempt to balance the economic impact of this proposed rule with the access concerns of persons with disabilities, the Board identified two issues with the greatest impact on floating facilities: gangway lengths and gangway slopes. As the range of water level changes increase, gangways generally increase in length. Where gangway lengths are restricted, supporting land and pier ramps must be provided, which increase the size and complexity of such gangway ramping systems. The study showed that by allowing a gangway length to increase beyond 30 feet, and even beyond 60 feet, the complexity and size of the gangway ramping system was often reduced. Therefore, this section proposes that the rise restrictions under ADAAG 4.8.2 not apply to gangways.

With respect to gangway slopes, the Board sought to balance access and the economic impact on small and large facilities. Exception 2 references table 15.2.1 which establishes conditions where gangways are permitted to exceed a 1:12 slope. The table is based on the vertical distance the water level descends below an established design high point and the square footage of all the fixed and floating piers at a boating facility. Since this exception only applies to gangways, accessible routes to fixed piers must conform to all requirements of ADAAG 4.3, including slope. Fixed piers are not subject to water level changes and gangways are not needed. Also, because this exception is applicable only to gangways, fixed ramping systems required on land or on floating piers must conform to all requirements of ADAAG 4.3, including slope.

The table permits, during the time the water level is beyond a certain distance from a design high point, a gangway to exceed the slope maximums of ADAAG 4.3. Although the exception allows slopes greater than allowed by ADAAG 4.3, the exception has not modified any other requirement of ADAAG 4.3, such as handrails. The exception applies to tidal and non-tidal settings and to all gangways within a boating facility that are part of an accessible route.

Based on this exception, some boating facilities will not have access conforming to ADAAG 4.3 all the time. Some facilities may have access conforming to ADAAG 4.3 only during times when the water level is at higher levels and as water levels decline, the gangway slopes will become steeper. Because gangway slopes rise and fall, it is possible that for some facilities, gangways will also have zero slopes for

certain water levels. Where table 15.2.1 establishes no maximum slope, a sloped surface is still required. Stairs are not permitted as a part of an accessible route.

Question 5: Some floating piers, although small, are designed primarily for use by larger passenger vessels, such as tour boats. The Board is considering adding a provision that would also control the slope of a gangway in some facilities based on the size of the vessels they are designed to accommodate. The Board is interested in the extent to which floating piers are provided for use by passenger vessels carrying more than 150 passengers or more than 49 overnight guests. Specific size and cost information for the construction of this type of facility is also requested.

15.2.1 Exception 3

This section exempts handrail extension requirements on gangways or landings where they connect to transition plates and permits transition plates to be free of handrail extensions.

ADAAG 4.8.5 requires that if a ramp has a rise greater than 6 inches or a horizontal projection greater than 72 inches, handrails are required on both sides. ADAAG 4.8.5(2) further provides that if handrails are not continuous, they shall extend at least 12 inches beyond the top and bottom of the ramp segment and be parallel with the floor or ground surface.

Because gangway slopes change, ensuring that handrail extensions remain parallel with adjacent walking surface would be difficult. In addition, if transition plates are required to have handrail extensions, these extensions would also have problems remaining parallel with adjacent walking surfaces and would overlap with the gangway extensions. For these reasons, handrail extensions are not required on gangways or landings where they connect to transition plates and are not required on transition plates.

15.2.2 Slips: Minimum Number

This section requires that where boat slips are provided, at least 3 percent, but not less than one, shall comply with 15.2.3. Accessible boat slips must be dispersed throughout the various types provided. This dispersion provision does not require an increase in the minimum number of boat slips required to be accessible.

The boating and fishing facilities subcommittee recommended that when boat slips are provided, the number of accessible boat slips be determined using the scoping provisions of ADAAG 4.1.2(5)(a) for vehicle parking spaces. Using ADAAG 4.1.2(5)(a), a 100-slip

boating facility would need 4 accessible boat slips. Most commenters responding to this recommendation in the ANPRM supported using the vehicle parking scoping. A few commenters questioned whether the need for accessible boat slips was the same as accessible vehicle parking spaces.

Designing accessible boat slips will have limited impact on newly constructed boating facilities. Wider piers and pier clearances are often incorporated into newer facilities. The 3 percent requirement was selected to parallel the accessible vehicle parking requirements. A percent was used, as opposed to a table, to simplify application. Therefore, a 50-slip boating facility would need two accessible boat slips and a 100-slip facility would need three accessible boat slips. However, where the number of boat slips cannot be identified, each 40 feet of mooring space provided along the perimeter of a pier shall be counted as one boat slip.

To ensure that persons with disabilities have access to different types of boat slips, 15.2.2 also requires that the accessible boat slips be dispersed throughout the various types provided. Types include the size of the boat slip, single berths, double berths, depth of the water, transient, longer-term lease, covered slips, and slips equipped with features such as telephone, water, electricity and cable connections. To satisfy this dispersal requirement, the provision does not require an increase in the minimum number of boat slips required to be accessible.

15.2.2.1 Slips Serving Boat Launch Ramps

This section requires that, in addition to the requirements of 15.2.2, where boat launch ramps are provided with boarding piers, at least one accessible boat slip complying with 15.2.3 be provided adjacent to a boat launch ramp.

This provision has been proposed to ensure that where boarding piers are provided at boating facilities with launch ramps, at least one launch ramp will have an accessible boat slip. This accessible boat slip is in addition to the accessible boat slips required by 15.2.2.

Where an accessible boat slip is required on a boarding dock, an accessible route complying with ADAAG 4.3 must serve the slip. Where the boarding dock is a floating dock, a gangway complying with 15.2.1 is permitted. Section 15.2.1, exception 2, includes the square footage of the dock in the total square footage of fixed and floating piers at the boating facility.

Boat launch ramps typically have slopes steeper than 1:12 (8.33 percent). Steeper slopes allow boats to float free of their trailers while the depth of the water does not submerge the tow vehicle's exhaust system. In saltwater areas, steeper slopes also reduce saltwater exposure to the underside of tow vehicles. In general, the Board is not proposing any provisions that will change the slope of a boat launch ramp. However, where an accessible route connecting an accessible boarding dock is coincident with the boat launch ramp, that portion of the launch ramp must meet the requirements of ADAAG 4.3, including slope.

15.2.2.2 Location

This section requires that among each type provided, accessible boat slips be those nearest to amenities provided in a boating facility. Since travel distance is often an important consideration for persons with disabilities, the Board proposes this section to address the location of accessible boat slips. First, under 15.2.2, the various types of boat slips are determined and the required accessible boat slips are assigned to the selected types. Then, under this section, within the group of boat slips of the same type, the accessible slips must be the ones nearest to the amenities provided in a boating facility. The following example illustrates this provision.

A boating facility has two piers, each containing 60 boat slips. With a total of 120 boat slips, four accessible boat slips would be required. One pier has transient slips and the other has long-term lease slips. Both piers are served by the same parking lot and a public restroom. At the end of the transient slip pier, a ship's store and fueling station are provided. To comply with 15.2.2.2, the two accessible slips on the long-term lease pier must be located closest to the amenities provided, the parking lot and restroom. On the transient pier, one slip next to the parking lot must be accessible and one slip nearest to the ship's store and fueling station must be accessible.

15.2.3 Accessible Boat Slips

This section contains provisions for accessible boat slips.

15.2.3.1 Pier Clearances

This section requires that accessible boat slips be served by clear pier space 60 inches wide minimum and at least as long as the accessible boat slip. At least one 60 inch minimum continuous clear opening must be provided within every 120 inch maximum of linear pier edge serving an accessible boat slip.

Using the vehicle parking spaces in ADAAG 4.6 as a guide, the Board is proposing that an accessible boat slip be provided a 60 inch wide minimum pier space, similar to an access aisle, and at least as long as the boat slip. Boat slips may contain features such as pillions, bollards and cleats, and utility connections such as electrical, water, and sewage that can block or interfere with transfer to and from a boat. This section also requires that every 120 inches maximum of linear pier edge contain at least one opening 60 inches minimum along the edge of a pier at accessible boat slips to allow for access to and from a boat. Flexibility has been provided to designers and operators to decide the placement of these openings, understanding that the purpose is to allow space for transfer to and from a boat. For example, a 40 foot long accessible boat slip would have at least four clear openings provided along the pier edge. The different openings will accommodate different size vessels and mooring orientations (e.g., stern first, bow first).

Fishing Piers and Platforms

15.3 Fishing Piers and Platforms

This section requires that each fishing pier and platform comply with 15.3.

15.3.1 Accessible Route

This section applies the requirements for gangways in 15.2.1 when an accessible route connects a floating fishing pier or a floating fishing platform. The Board recognizes that floating fishing piers and floating fishing platforms are subject to many of the same constraints as floating boating piers. As a result, the gangway provisions of 15.2.1 would apply. The total square footage of floating and fixed pier space at a fishing facility must be used to determine the requirements for a gangway accessing a fishing pier or platform. If a boating facility has a floating boarding dock at a boat launch ramp and another floating structure which serves as a fishing platform, both the square footage of the boarding dock and the fishing platform would be used under 15.2.1, Exception 2, to determine the slope criteria for the gangway accessing the fishing platform. Likewise, the same square footage would be used to determine the slope criteria for the gangway accessing the boarding dock.

15.3.2 Railings

This section requires that where railings, guardrails, or handrails are provided, they must comply with 15.3.2.

15.3.2.1 Edge Protection

Where railings, guardrails, or handrails are provided, this section requires edge protection to be provided and extend 2 inches minimum above the ground or deck surface. The requirement for edge protection is triggered only where railings, guardrails, or handrails are provided on a fishing pier or platform. Edge protection will prevent wheelchairs and other mobility aids from slipping off the fishing pier or platform.

15.3.2.2 Height

Where railings, guardrails, and handrails have been installed on fishing piers and platforms, the height of the railings interfere with fishing and block vision for persons who use wheelchairs and other mobility devices. This section requires at least 25 percent of the railings to be a maximum of 32 inches high above the surface of the fishing pier or platform to address this problem. The section is based on the recommendations from the boating and fishing subcommittee. Anglers who stand can fish from any part of the pier or platform and change location depending on the fishing conditions. The boating and fishing subcommittee wanted to ensure that persons with disabilities have a similar range of choices to fish from a variety of locations.

This section does not address the material or spacing between the horizontal or vertical supports and between the top of the railing and the surface of the fishing pier or platform. Building codes and standards, and common construction practices address the design of these spaces, which can be solid or include vertical or horizontal barriers.

During the advisory committee meetings and in the comments on the ANPRM, questions were raised regarding whether guardrail standards issued by the Occupational Safety and Health Administration (OSHA) apply to recreational fishing piers and platforms. The OSHA standards apply "with respect to employments performed in a workplace." 29 CFR 1910.5(a). The OSHA guardrail standards provide in relevant part that "[e]very open-sided floor or platform 4 feet or more above adjacent floor or ground level shall be guarded by a standard railing." 29 CFR 1910.23(c). OSHA prescribes a 42 inch height for a standard railing. 29 CFR 1910.23(e). The Board has conferred with OSHA's Directorate of Compliance Programs, and that office has confirmed that OSHA does not routinely enforce

its guardrail standards at recreational fishing piers and platforms.

Question 6: Many building codes and standards generally require a guardrail not less than 42 inches in height where there is an unenclosed floor opening more than 30 inches above the grade or floor below. These codes and standards do not require guardrails at certain locations such as the loading side of a loading dock or raised platforms used for entertainment, and permit lowered railings at other locations such as in front of the first row of fixed seats on a balcony. The Board seeks information about whether these codes and standards have been applied to recreational fishing piers and platforms. Where lower guardrails have been used, the Board is interested in knowing the height of those lower guardrails and what steps were taken to ensure that their use was permitted under the applicable codes and standards. In light of concerns that have been raised about safety issues related to lower guardrails, the Board also is interested in any experiences designers or operators have had where guardrails have been lowered to accommodate individuals using wheelchairs and other mobility devices.

15.3.2.3 Dispersion

This section requires that lowered railings (32 inch maximum) required by 15.3.2.2 be dispersed throughout a fishing facility. This provides anglers with disabilities with a choice of locations for fishing on a fishing pier or platform.

15.3.3 Clear Pier or Platform Space

This section requires that at least one clear space complying with ADAAG 4.2.4 be provided where the railing height required by 15.3.2.2 is located. Where no railings are provided, at least one clear space complying with ADAAG 4.2.4 shall be provided on the fishing pier or fishing platform. The Board has not set a minimum size for a fishing pier or platform, but has proposed minimum clear space requirements so that the accessible route can be adjacent to the 32 inch maximum high rails.

15.3.4 Maneuvering Space

This section requires that at least one maneuvering space complying with ADAAG 4.2.3 be provided on a fishing pier or platform to allow persons who use wheelchairs to turn and exit the space safely.

Golf

The golf subcommittee developed recommended accessibility guidelines for newly constructed 18 and 9 hole golf courses and for miniature golf courses.

In examining 18 and 9 hole golf courses, the golf subcommittee considered all elements of the course and made recommendations that would increase accessibility for persons with disabilities without significantly changing the game of golf. Issues involving the application of ADAAG accessible route provisions were important in the golf subcommittee's discussions.

3.5 Definitions

This section defines terms used in the proposed rule. Terms and definitions established within the industry have been used to the greatest extent possible.

The term "golf car passage" is defined as a continuous passage on which a motorized golf car, also known as golf carts, can operate. Designers and operators sometimes use the term "golf car path" to identify what the Board is defining as a "golf car passage". Because the term "golf car path" may connote a prepared surface, the term was not used. While a golf car passage must be usable by golf cars, it does not necessarily need to be a prepared surface.

The Board recognizes that not all golf courses provide golf cars or golf car passages. However, by requiring a course to be designed and constructed to allow for golf car travel between accessible elements and spaces on a course, individuals who bring their own golf car or use those provided at a course, will have the opportunity to play the game of golf. On most courses where golf cars are not provided, paths for maintenance vehicles often exist which could support golf car passages and generally connect many of the elements and spaces required to be accessible.

A "teeing ground" is defined as the starting place for a hole to be played. This definition is consistent with the United States Golf Association definition, which describes a teeing ground as a rectangular area two club-lengths in depth, with the front and sides defined by the outside limits of two tee-markers.

15.4.1 Accessible Route

This section requires that, where the accessible route is located within the boundary of a golf course, it must be 48 inches wide minimum and connect to the bag drop areas, accessible teeing grounds, and putting greens. Additionally, where handrails are required, the accessible route is required to be 60 inches wide minimum.

The golf subcommittee considered the ADAAG requirements for an accessible route to be impractical on a golf course

for several reasons. First, the route of play for a golfer is dependent on where the ball lands and is therefore unpredictable. Secondly, there is an assumption that on most courses, most golfers use a golf car to move throughout the course. Finally, the golf subcommittee raised concerns that requiring an accessible route throughout a course would substantially alter the slopes within a course and eliminate some of the challenge of the game.

As a result, the golf subcommittee recommended that an accessible route only be required to connect course elements from a golf car path or a golf car parking area. This was intended to allow a golfer with a disability to ride in a golf car to reach a point where an accessible route would provide access to various course elements. Public comment received from golf course architects, operators, and the Association of Disabled Golfers to the ANPRM generally supported this approach.

The Board agrees that making the game of golf accessible to the majority of persons with disabilities can be achieved primarily through the use of golf cars. These proposed guidelines incorporate the concept of providing access through a golf car passage and allow for access to various elements. These proposed guidelines also ensure that all of the amenities (such as snack bars, toilet rooms, and weather shelters) on a course are accessible and are connected by a golf car passage.

Question 7: These proposed guidelines are based on the golf subcommittee's recommendations for 18 and 9 hole courses. Should smaller courses (i.e., 3 or 6 holes) have the option of using a golf car passage in lieu of a modified accessible route?

15.4.1 Exception 1

This exception permits the use of a golf car passage in lieu of all or part of an accessible route within the boundary of a golf course. This exception does not apply to practice putting greens and driving ranges since they are not located within a course.

Question 8: The proposed requirements for a golf car passage seek to provide access for players on a golf course. The Board requests comments on how access should be provided for spectators during a golf tournament.

15.4.1 Exception 2

This exception provides that accessible routes within the boundary of a golf course are not required to comply with handrail requirements in ADAAG 4.8.5. It is hazardous for handrails to be located through a green, or on teeing

grounds, because of the danger of golf balls ricocheting off rails. Since most elements are required to be accessible from golf car paths, handrails would be of little utility along those routes.

15.4.2 Teeing Grounds

This section requires that where one teeing ground is provided for a hole, it must comply with 15.4.7. If two or more teeing grounds are provided for a hole, at least two teeing grounds must be accessible. The golf subcommittee recommended that as many teeing grounds as possible be made accessible on each hole, but that at least one accessible teeing ground per hole be required. The golf subcommittee based its recommendation on the premise that an accessible route with a running slope not exceeding 1:20 may be required to connect the golf car path and the teeing ground, and that it may not be possible to provide such a route to each teeing ground due to sloped terrain. The exception to 15.4.1, which permits the use of a golf car passage in lieu of an accessible route with the boundary of a golf course, is very flexible and would allow a golfer with a disability to access the teeing ground by using a golf car, instead of providing an accessible route to the area. The Board recognizes that some teeing grounds may be located on steep slopes and that it may not be possible to provide a golf car passage to each teeing ground. Comments to the ANPRM recommended that more than one accessible teeing ground be required for each hole. Commenters were concerned that if only one accessible teeing ground per hole were required, it would be the forward tee. Commenters considered that this would be discriminatory toward golfers with disabilities. When golf courses provide several teeing grounds for each hole, the placement of these areas is usually based on skill level (e.g., one set of teeing grounds would be the "pro tee" and the other set would be the "amateur tee"). Golfers with disabilities want the same range of choice to play from different teeing grounds appropriate to their skill levels. The proposed rule would ensure a range of choice for golfers with disabilities.

Question 9: The Board requests comments on the number of accessible teeing grounds that should be required for each hole. If more than one accessible teeing ground is required per hole, should one of the accessible tees be the forward tee?

15.4.3 Driving Ranges and Practice Tees

This section requires that where driving ranges or practice tees are provided, at least 5 percent, but not less

than one, of the practice tees must comply with 15.4.7. This provision applies to practice facilities adjacent to a golf course, in addition to stand-alone facilities.

15.4.4 Weather Shelters

This section requires weather shelters to be designed and constructed to allow a golf car to enter and exit in a forward direction and have a clear floor or ground space 60 inches minimum by 96 inches minimum. This space will allow a golf car to be driven directly into a weather shelter.

15.4.5 Golf Car Passage

This section requires openings at least 60 inches wide at intervals of 75 yards where curbs or other manmade barriers are provided along a golf car passage to prohibit a golf car from entering a fairway. These openings will provide access to fairways at reasonable intervals where golf cars are used to play the game.

15.4.5.1 Width

This section requires a golf car passage to be 48 inches wide minimum. This dimension is based on the standard width of gasoline or electric powered golf cars.

Question 10: Although the Board has proposed to allow a golf car passage within a golf course, limited technical requirements have been proposed for golf car passages. Should the Board establish additional technical requirements (e.g., maximum slope or changes in level)? Do criteria exist which govern the design and construction of golf car paths? Do requirements applicable to golf car paths exist in State or local codes? Do slope and width criteria allow use of the golf car passage by golf cars?

15.4.6 Putting Greens

This section requires putting greens to be designed and constructed to allow a golf car to enter, maneuver within, and exit the putting green. Unlike teeing grounds, each hole of a golf course is provided with only one putting green where the hole is located. This provision supports the use of a golf car on the putting green and requires space to allow a golf car to approach, enter, and exit. This requirement should not impact the design or space required for putting greens.

15.4.7 Teeing Grounds

This section requires teeing grounds to be level with a clear space of 10 feet by 10 feet and be designed and constructed so that a golf car can enter in a forward direction and maneuver.

This dimension is wide enough to accommodate a player playing off of the side of a golf car or from a wheelchair. The teeing ground is required to be level since slopes and cross slopes are difficult for wheelchair users to manage even on relatively flat routes of travel.

Question 11: Proposed technical provisions for teeing grounds require cross slopes no greater than 1:48 in all directions. The Board understands that maintaining this slope may be difficult on turf surfaces due to settling. Drainage problems have also been reported in areas where 1:48 slopes are provided. The Board requests information from operators on the maintenance of teeing areas where 1:48 slopes are provided.

The proposed rule does not contain any requirements for access to bunkers or other hazards. The golf subcommittee recommended that practice bunkers be made accessible, but not bunkers and hazards on the course. There was minimal support in the comments to the ANPRM to make bunkers and hazards accessible.

Miniature Golf

The golf subcommittee recommended accessibility guidelines for miniature golf facilities. While the majority of commenters responding to the ANPRM supported the recommendations, several operators and miniature golf trade groups were opposed to the recommendations. Concerns were expressed that the recommended accessibility guidelines would require additional space and cost, and would be too onerous for operators. There were also concerns about the loss of curbing in areas where a ball may ricochet.

To obtain additional information on providing access to miniature golf courses, the Board participated in information meetings with designers, operators, persons with disabilities, and representatives from miniature golf trade associations. The purpose of these meetings was to gather additional information about the varied range of facility types, accessibility barriers, obstacles for designers in providing accessibility, options for making individual holes accessible, providing an accessible route throughout a course, and trends in miniature golf course design. The Board has taken this additional information into account in proposing accessibility guidelines for miniature golf courses.

15.5 Miniature Golf Courses

This section requires each hole on a miniature golf course to be accessible. The technical requirements for an accessible hole on a miniature golf

course are addressed in 15.5.2 and 15.5.3.

15.5 Exception

This exception permits no more than 50 percent of elevated miniature golf holes to be inaccessible. Since elevated holes are often designed to provide more of a challenge, this provision is proposed to ensure that a person with a disability has adequate opportunities to play some of the more challenging holes. The golf subcommittee recommended that all holes be made accessible. Operators and miniature golf trade groups felt that a requirement for every hole to be accessible would result in flat courses, taking some of the fun and challenge from the game. Commenters to the ANPRM also expressed concern that the golf subcommittee recommendations would have a negative impact on business or eliminate smaller courses by requiring accessible routes to all portions of a course. This proposed exception provides a compromise between the golf subcommittee's recommendation and the concerns of the industry and operators.

Question 12: Miniature golf course operators have claimed that additional costs may be associated with providing an accessible route to all elevated holes of a miniature golf course. These additional costs, however, have not been associated with courses that are considered level. The Board is seeking specific guidance on how to differentiate between level and elevated holes.

15.5.1 Accessible Route

This section requires that at least one accessible route connect start of play areas on each accessible hole. The accessible route connecting each start of play area required to be accessible may be located on the hole or adjacent to the hole. The accessible route must comply with ADAAG 4.3 and 4.8, where the slope of the route exceeds 1:20.

15.5.1 Exception 1

This exception permits readily removable curbs where the accessible route intersects the playing surface of a hole. The golf subcommittee recommended that the entry and exit points of a miniature golf hole be free of railings, obstacles, and elevation changes. During the comment period for the ANPRM, miniature golf course operators and the industry expressed concerns that this recommendation would significantly alter the play of the game. It was noted that curbs surround the majority of holes on a miniature golf course to prevent a ball from exiting a

hole. This proposed exception balances the need for a person with a disability to access the hole and the concern to keep the ball on the hole.

To maximize the benefit of this feature, it will be important for players using the miniature golf course to know the location of the readily removable curbs. Several options are recommended for operators and designers including signage placed directly on the curb to show that it is removable or including information about the location of these curbs on the scorecard provided for players at the start of the game.

15.5.1 Exception 2

This exception permits a maximum slope of 1:4 for a maximum rise of 4 inches where the accessible route is located on the playing surface of a hole. This exception is only applicable where the accessible route connecting start of play areas is located on the hole. Permitting a greater slope for a limited distance will allow more flexibility in the design of the hole, while still providing access on the hole for the play of the game.

15.5.1 Exception 3

This exception eliminates the requirement for handrails on a ramp located on a miniature golf hole. Handrails are a potential hazard on a hole, because of the danger of golf balls ricocheting off the rails.

15.5.2 Start of Play Areas

This section requires a start of play area to be a 60 inch minimum by 60 inch minimum level area. This level start of play area is necessary so that a person using a wheelchair or other mobility device has sufficient space to maneuver into position to play the game.

15.5.3 Golf Club Reach Range

This section requires that all level areas within an accessible hole be located within 27 inches maximum of an accessible route with a slope not to exceed 1:20. This will allow space for wheelchair users to hit the ball from on the hole or from an accessible route adjacent to the hole. The space requirements incorporate the reach of a golf club. This provision allows persons with disabilities to be within the reach of their ball at all times, while not increasing the size of individual holes.

Play Areas

15.6 Play Areas [Reserved]

This Board issued proposed accessibility guidelines for play areas in April 1998. This section is reserved for the final guidelines for play areas,

which will be incorporated into this section in the future. Figures 64 to 74 are reserved for the play areas guidelines.

Sport Facilities

The sports subcommittee provided the Board with recommended accessibility guidelines for sports facilities. The sports subcommittee addressed a variety of sports facilities such as fitness centers, aerobic and martial arts studios, roller and ice skating rinks, leisure pools, lap pools and other swimming pools, bowling centers, horse racing facilities, and facilities for court sports (e.g., handball, basketball, tennis, racquetball, volleyball), field sports (e.g., baseball, lacrosse, soccer, track, softball, football, rugby) and gymnastics. This proposed rule is based on the sports subcommittee's recommendations and the comments received to the ANPRM.

3.5 Definitions

This section defines terms used in the proposed rule.

The term "area of sport activity" distinguishes that portion of a room or space where the play or practice of a sport occurs from adjacent areas. Examples of areas of sport activity include basketball courts, baseball fields, running tracks, bowling lanes, and the area surrounding a piece of fixed gymnastic equipment. While the size of an area of sport activity may vary from sport to sport, each includes only the space needed to play. The following examples are provided for additional clarification.

Example 1. Boundary lines define the field where a football game is played. A safety border is also provided around the field. The game may temporarily be played in the space between the boundary lines and the safety border when players are pushed out of bounds or momentum carries them forward while receiving a pass. Because the game of football anticipates that the space between the boundary line and the safety border is used to play the game, this space and the football field are included in the area of sport activity.

Example 2. Uneven bars and other pieces of gymnastic equipment generally include space around the equipment for gymnasts to safely use the apparatus, including mounting and dismounting. In this example, the area of sport activity includes the space within which the apparatus is located.

The sports subcommittee recommended the term "field of play" as a definition for the area where a sport is practiced or played. This term is not used in this guideline. However, the

intent of the "field of play" concept is preserved. The term "area of sport activity" is used to indicate that the area required to be accessible is broader than a field of play and encompasses activities other than field sports.

4.1.1(5)(b)(iv)

This section provides a new general exception for access to raised structures used solely for refereeing a sport. This provision exempts raised structures such as elevated judging stations for horse racing facilities and refereeing stands used for volleyball games and tennis matches. These raised structures are similar to those currently exempted under ADAAG 4.1.1(5)(b), such as observation galleries, prison guard towers, fire towers, and fixed lifeguard stands. This exception should not be construed to obviate the obligations of State and local government entities to provide program access under title II of the ADA or for employers to provide reasonable accommodation under title I of the ADA.

4.1.2(2)(a)

This section requires that an accessible route complying with ADAAG 4.3 must connect both player ends of a court. Where there are multiple courts, such as in tennis complexes, net posts for adjacent courts may be too close to provide the minimum width required for an accessible route. This provision, however, requires only one accessible route between player ends of a court. Therefore, not every opening between adjacent net posts must comply with ADAAG 4.3. One opening could serve two adjacent courts. If a route is not accessible, it will restrict the movement of persons with disabilities between player ends of a court. Movement between ends is necessary for switching sides during the play of a game. To reduce redundancy, similar changes to ADAAG 4.1.3 (Accessible Buildings: New Construction) have not been included in this proposed rule.

4.1.2(2)(a) Exception

This exception provides that vertical access to raised boxing rings is not required. ADAAG 4.3 requires at least one accessible route to connect accessible buildings, facilities, elements, and spaces that are on the same site. Rope barriers surrounding the raised area are an integral part of boxing rings. The ropes prevent the installation of an accessible route without compromising the integrity of the barrier. Modifications to this design feature would fundamentally change the nature of the sport. Therefore, the Board is

proposing an exception for vertical access for these unique spaces. To reduce redundancy, similar changes to ADAAG 4.1.3 (Accessible Buildings: New Construction) have not been included in this proposed rule.

4.1.2(3)

This exception provides that ADAAG 4.4, which sets requirements for protruding objects, does not apply to areas of sport activity. The sports subcommittee recommended that only exercise machines and gymnastic equipment be exempt from the requirements of ADAAG 4.4. However, in addition to exercise machines and gymnastic equipment, many other sports are played or practiced in facilities that contain protruding objects which are necessary for the play or practice of a sport. Examples include protrusions on obstacle courses and climbing walls. The exception for protruding objects is proposed because requiring most areas of sport activity to comply with ADAAG 4.4 would change the sport itself. To reduce redundancy, similar changes to ADAAG 4.1.3 (Accessible Buildings: New Construction) have not been included in this proposed rule.

4.1.2(4) Exception 1

Exception 1 provides that areas of sport activity are not required to comply with ADAAG 4.5, which sets requirements for accessible ground and floor surfaces. In proposing this exception, the Board has attempted to address accessibility to sports by balancing the conditions desired for sports facilities with the needs of persons with disabilities. Rules that govern a sport, or even common practices, often dictate the surface conditions of an area of sport activity. In examining the application of ADAAG to areas of sport activity, the sports subcommittee noted that ADAAG 4.1.2(4) and 4.1.3(3) require the entire surface of an accessible room or space to conform to ADAAG 4.5. Based on this, most sporting areas would be required to provide surfaces that are stable, firm, and slip-resistant and, where changes in level occur, ramps or other accessible means of vertical access. For example, beach volleyball, played on sand, and hockey, played on ice, would require stable, firm and slip-resistant surfaces. Requiring these surfaces to be accessible would fundamentally change these sports. Additionally, obstacle courses that have tires, beams, logs and other raised features would require accessible changes in level. The changes in level

are integral to the desired experience on an obstacle course.

Under the proposed guidelines, areas of sport activity are considered an accessible space and are required to be connected by an accessible route to other accessible spaces and elements on a site. While the Board considers it necessary to permit exceptions for accessible surfaces, including level changes, in areas of sport activity, the accessible route connecting these spaces is critical and is not exempted. The required accessible route can be located where it does not enter an area of sport activity. To reduce redundancy, similar changes to ADAAG 4.1.3 (Accessible Buildings: New Construction) have not been included in this proposed rule.

4.1.2(4) Exception 2

Exception 2 provides that in hoofed animal containment areas, the requirements of ADAAG 4.5 for stable, firm, and slip resistant surfaces do not apply. The provision is an exception to the surface requirement for accessible routes. In some facilities, including permanent fairgrounds, animal containment areas are open to the public for animal viewing, petting, and display. Absorbent material such as wood shavings, sawdust, and straw is provided for sanitary reasons. In most applications, a surface composed of such materials would not comply with the surface requirements of ADAAG 4.5.

Additionally, surfaces that are not firm or stable are sometimes necessary to ensure the safety and health of the animals. A hard pavement, for example, can damage the tissue of a hoof. This exception is consistent with the sports subcommittee's recommendations that included input from designers and operators responsible for hoofed animal containment areas.

While the sports subcommittee recommended additional exceptions for the requirements for accessible routes and protruding objects in hoofed animal containment areas, the Board does not consider these necessary. Exception 2 only addresses those issues that conflict with sanitation and animal welfare. Since accessible routes can be located to avoid other features in livestock facilities where conflicts with the accessible route provisions may exist, the Board has not proposed any other exemptions. To reduce redundancy, similar changes to ADAAG 4.1.3 (Accessible Buildings: New Construction) have not been included in this proposed rule.

4.1.3(12)(c)

This section requires that 5 percent, but not less than one, of each type of

locker be accessible. Lockers are required to comply with the requirements for storage in ADAAG. The sports subcommittee recommended that 5 percent of lockers in a locker room be accessible. The Board supports this recommendation and has also included a specific provision that one of each type of locker be accessible. Different types of lockers may include full-size and half-size lockers, as well as those specifically designed for temporary storage of various sports equipment.

4.1.3(13) Exception

This provision exempts exercise machines from the requirements of ADAAG 4.27 that controls and operating mechanisms must have clear floor space, be located within accessible reach ranges, and be operable with one hand and not require tight grasping, pinching, or twisting of the wrist. Where applicable, ADAAG 4.27 also requires that the force required to activate controls be no greater than 5 lbf.

Many of the requirements of ADAAG 4.27, as outlined above, may conflict with the operating characteristics of some exercise machines and equipment. Requiring compliance would significantly alter their design and function. While this section proposes an exception to the requirements of ADAAG 4.27, a new section 15.7.1 is proposed which includes a requirement for clear floor space for accessible exercise machines and equipment.

4.1.3(19)(c)

This section requires that wheelchair spaces be provided in team or player seating areas serving accessible areas of sport activity. ADAAG 4.1.3(19)(a) requires wheelchair spaces to be provided in spectator areas with fixed seating. This section requires wheelchair spaces to be provided in team or player seating areas in addition to the wheelchair spaces required for spectators. Where fixed seating is provided in team or player seating areas, no more than one to two wheelchair spaces are required based on the total number of seats provided.

Wheelchair spaces in the team seating area must be connected by an accessible route and be provided with companion seating. The requirement to provide an accessible route to the team seating area does not necessarily require the accessible route to be located on the area of sport activity. The requirement for companion seating in this application is intended to include other team members and personnel. The section does not propose changes to the technical requirements for accessible

seating in ADAAG 4.33.2, 4.33.3, 4.33.4, and 4.33.5.

Professional and college baseball facilities often have recessed team seating areas, usually referred to as dugouts. A dugout has a rear wall, side walls and a roof. This configuration provides secure team seating, visibility for managers and a protected vomitory for players to safely enter and exit the area of sport activity. The recessed seating also allows for unobstructed spectator viewing over the team seating area.

The sports subcommittee recommended that the use of platform lifts be permitted in new construction to provide access from a recessed dugout to the playing field. The sports subcommittee cited the exception under ADAAG 4.1.3 (5) Exception 4(a) which permits the use of platform lifts when providing access to a "performing area." The sports subcommittee was concerned that if spectator seating is raised, lines of sight could be adversely affected. For this reason, the sports subcommittee recommended that such sight line constraints may justify the use of a platform lift.

The proposed rule requires an accessible route to the team and player seating areas and to the area of sport activity. In a baseball facility, for example, an accessible route is required to connect a recessed dugout with the playing field. The Board does not agree with the sports subcommittee's recommendation that platform lifts be allowed to provide access to areas of sport activities and has not proposed an exception for a platform lift in new construction from a dugout. Providing ramp access facilitates more independent access for coaching and other management staff and others using playing fields for special events. Since it is technically feasible in new construction to design for ramp access, the Board does not believe that there is sufficient rationale for persons with disabilities to rely on a platform lift to gain access to a field.

Question 13: Several new minor league baseball stadiums have provided ramp access from the dugout to the field by extending the ramp parallel to the fence line along the spectator seats. The Board is interested in receiving information about this and other designs for providing ramp access from the dugout to the field. The Board also is interested in knowing whether these ramp designs have presented any safety concerns for players or have interfered with the play of the sport (e.g., catching foul balls).

4.1.3(21)

This section amends ADAAG 4.1.3(21) by requiring that where a public or common use dressing, fitting, or locker room is provided, the room must comply with ADAAG 4.35. An exception is included permitting five percent of dressing, fitting, or locker rooms to be accessible when they are provided in a cluster. Additionally, at least one of each type of room in each cluster is required to be accessible.

This section clarifies that locker rooms are required to be accessible, regardless of whether they contain dressing rooms. Additionally, dressing rooms not located within larger rooms or clusters are required to be accessible. A reference to locker rooms has been added and scoping included for non-cluster situations. For consistency with other ADAAG scoping sections, the Board has also changed the reference from rooms used "by general public, patients, customers, or employees" to "public or common use" rooms.

4.1.3(22)(a)

This section requires that where saunas or steam rooms are provided, each room must comply with ADAAG 4.36, which provides new technical provisions for accessible saunas and steam rooms.

4.1.3(22)(a) Exception

This section provides an exception where saunas or steam rooms are provided in a cluster. Five percent, but not less than one, of sauna and steam rooms for each type of use in each cluster of rooms must comply with ADAAG 4.36.

The sports subcommittee recommended that each sauna and steam room be accessible in new construction. However, the Board is aware that some facilities have clusters of small sauna rooms which are designed for one or two persons. Compliance with the proposed technical requirements in 4.36 without an exception could have the effect of eliminating such smaller units. Since saunas are similar in size to dressing rooms, the Board has proposed to address clustered sauna and steam rooms in the same manner as clustered dressing rooms in ADAAG 4.1.3(21).

4.35 Dressing, Fitting, and Locker Rooms

4.35.1 General

This section requires that locker rooms comply with ADAAG 4.35.

4.35.4 Bench

This section requires that accessible dressing rooms, fitting rooms, and locker rooms have a bench complying with ADAAG 4.37, which provides new technical provisions for accessible benches.

4.36 Saunas and Steam Rooms

4.36.1 General

This section requires that saunas and steam rooms required to be accessible comply with the technical provisions of ADAAG 4.36.

4.36.2 Turning Space

This section requires turning space complying with ADAAG 4.2.3 to be provided within a sauna or steam room. Turning space is required within a sauna or steam room so that the door to the room can be opened independently by all users. The sports subcommittee did not recommend that a turning space be required within a sauna or steam room. In part, the sports subcommittee's rationale was based on an additional recommendation for a signaling device that would permit individuals to indicate a need to exit the room. Many commenters to the ANPRM did not support the recommendation for a signaling device citing safety concerns when individuals may be trapped in a sauna or steam room. Commenters also indicated that the requirement for a signaling device may be too onerous for operators. The Board agrees and has not proposed a requirement for a signaling device. To be effective, such a device would require monitoring and a method for assuring it is functional at all times.

4.36.2 Exception

This exception allows the turning space in saunas or steam rooms to be temporarily obstructed by readily removable seats. This allows operators an option for smaller units designed for one or two persons.

Knowing the location of the readily removable seats will be important for both operators and users of the saunas and steam rooms. Several options are recommended for operators and designers including signage indicating the location of the removable seat or by incorporating information about the location of the seat into other general user information.

Question 14: The proposed accessibility guidelines for saunas do not require grab bars or other types of handholds. The Board is interested in whether some type of grab bar or handhold should be required to assist users when transferring from a wheelchair onto a bench in a sauna or

steam room. Specific information on the location and types of handholds and grab bars recommended for this use is also requested.

4.36.3 Bench

This section requires that, where provided, benches in saunas and steam rooms must comply with ADAAG 4.37, which provides new technical provisions for accessible benches.

4.36.3 Exception

This exception allows the clear floor space required by ADAAG 4.37.1 at an accessible bench in saunas or steam rooms to be temporarily obstructed by readily removable seats. As previously discussed, being aware of the location of the removable seat either by signage or other user information is important for both operators and users.

4.36.4 Door Swing

This section provides that doors must not swing into the required clear floor space at an accessible bench in a sauna or steam room.

4.37 Benches

4.37.1 Clear Floor or Ground Space

This section requires that clear floor or ground space be provided and be positioned for a parallel approach to an end of the bench seat.

4.37.2 Size

This section provides technical criteria for accessible benches, including seat dimensions and back support. The seat on an accessible bench is required to be 20 to 24 inches deep and 42 inches long minimum. The bench is required to be fixed and provide back support which is 42 inches minimum in length and extend from a point two inches maximum above the bench to a point 18 inches minimum above the bench. These dimensions provide back support to approximately chest level on most adults. Back support may be achieved through locating benches adjacent to walls or by other designs that will meet the minimum dimensions specified.

4.37.3 Height

This section requires a bench seat to be 17 inches minimum to 19 inches maximum above the floor or ground. This height requirement is consistent with the bench height established in ADAAG 4.35.4 for benches located in dressing and fitting rooms.

4.37.4 Structural Strength

This section requires that allowable stresses not be exceeded for materials used when a vertical or horizontal force

of 250 lbs. is applied at any point on the seat, fastener, mounting device, or supporting structure.

4.37.5 Wet Locations

This section requires accessible benches, when installed in wet locations, to be slip-resistant and not accumulate water. This section is consistent with the requirements in ADAAG 4.35.4 for benches installed in conjunction with showers, swimming pools, and other wet locations.

15.7 Sports Facilities

15.7.1 Exercise Equipment and Machines

This section requires that at least one of each type of exercise equipment and machine be provided with clear floor space complying with ADAAG 4.2.4 and be served by an accessible route. The required clear floor space must be positioned for transfer or positioned so that the equipment can be operated by an individual seated in a wheelchair. The position of the clear floor space may vary greatly depending on the use of the equipment or machine. For example, to make a stationary bicycle accessible, clear floor space adjacent to the seat would be appropriate to allow for transfer. Clear floor space for a bench press machine designed for use by an individual seated in a wheelchair, however, will most likely be centered on the operating mechanisms.

Fitness facilities often provide a range of choices of equipment. For example, there are many different types of strength training machines and equipment. Each is designed to address a particular muscle group such as quadriceps, biceps, and abdominal muscles. Similarly, there are many types of cardiovascular exercise machines, such as stationary bicycles, rowing machines, stair climbers, and treadmills. At least one of each type of exercise equipment and machines must be served by an accessible route.

This proposal is consistent with the recommendation of the sports subcommittee. The sports subcommittee recommended that accessible routes be provided to and around exercise equipment and machines. The sports subcommittee also noted that many pieces of exercise equipment and machines are not fixed, and therefore, are not within the scope of ADAAG. ADAAG applies to fixed equipment. Access to non-fixed equipment, however, is covered by the ADA when provided by a public entity or a public accommodation. The obligations of covered entities providing this

equipment are established by the Department of Justice ADA regulations.

15.7.2 Bowling Lanes

This section requires at least five percent, but not less than one, of each type of bowling lane provided to be accessible. This requirement is consistent with other ADAAG provisions where multiple features are provided for the same use. Ten pin and duckpin bowling are among the different types of bowling lanes that may be provided in a bowling facility. Where team and player areas are provided in conjunction with accessible bowling lanes, ADAAG 4.1.3(19)(c) would apply and require accessible wheelchair spaces. Designers and operators have flexibility in the location of the required accessible lanes and seating areas. If fixed spectator seating is provided, ADAAG 4.1.3(19)(a) specifies the number of wheelchair spaces that must be provided as a part of a bowling facility spectator area.

15.7.3 Shooting Facilities

This section requires at least at least five percent of the total, but not less than one, of each type of fixed firing position provided to be accessible. Examples of different types of firing positions include, but are not limited to, positions having different admission prices, positions with or without weather covering or lighting, and different shooting events the fixed firing position is intended to support. Events include argon, muzzle loading rifle, small bore rifle, high power rifle, bulls eye pistol, action pistol, silhouette, trap, skeet, and archery (bow and crossbow).

15.7.3.1 Fixed Firing Position

This section requires that an accessible fixed firing position contain a turning circle at least 60 inches in diameter that has a slope not steeper than 1:48 in all directions. A turning circle is needed at accessible firing positions to ensure sufficient maneuvering space for aiming.

Swimming Pools, Wading Pools, and Spas

The sports, places of amusement, and outdoor developed areas subcommittees each provided recommendations in this area. The recommendations from these subcommittees were fairly consistent; however, there were some differences. For example, the sports subcommittee recommended that the methods of providing access into the water be limited to ramps, lifts, or combination stairs-transfer tiers. The places of amusement subcommittee provided the identified methods as examples, but did

not limit accessible alternatives to those identified. The places of amusement subcommittee recommended that handrails be required on only one side of ramps, while the sports subcommittee recommended 22 inches clearance between handrails. The outdoor developed areas subcommittee recommended that the need for handrails at ramps, for example, be determined by the facility designer.

Comments to the ANPRM generally agreed with the recommendations of the three subcommittees in terms of requiring one means of access into the water. Many commenters recommended that more specific technical specifications would be necessary to ensure compliance and reduce confusion.

In October 1995, the Board sponsored a research project on swimming pool access. The project was conducted by the National Center on Accessibility at Indiana University. The project included an extensive literature review, telephone surveys of persons with disabilities, telephone surveys of pool operators and on-site testing of various means of accessing the water. Based on this research, the Board received additional information on the specific designs and requirements for providing safe and independent access into the water. The results of the project also supported many of the initial recommendations of the subcommittees. Based on this research and the information provided by the subcommittees, the Board is proposing accessibility guidelines for accessible entry and exit to and from the water.

In addition to the input received from the Board sponsored research project, significant input has also been provided by the ANSI/NSPI-1 Public Pool Standard Committee. This standard is currently under revision. With a parallel development process occurring for these standards, diverse input was received from pool designers and operators on accessibility guidelines for people with disabilities. The Board has made extensive efforts to maintain consistency between the ANSI/NSPI-1 standard and ADAAG. The Board will continue its efforts to seek input and achieve harmonization with the ANSI/NSPI-1 standard.

15.8.1 Swimming Pools

This section requires that at least two means of entry and exit be provided for each public and common use swimming pool. A sloped entry or lift must be the primary means of access. The secondary means of access is not permitted to duplicate the primary means and also allows transfer walls, transfer systems,

stairs, or moveable floors as a means of access. An exception permits swimming pools with less than 300 linear feet of swimming pool wall to have only one means of access, but that means of access must be either a lift or sloped entry.

This section is generally consistent with the recommendations of the subcommittees and is supported by the Board sponsored research project. Sixty percent of the people with disabilities interviewed during the research project had used a pool during the previous year, and most, once a month. Of those individuals, 99 percent indicated that one or more means of access should be required at each pool. The need for more than one means of pool access was also supported by pool operators who participated in the study. At least one means of access was already being provided at 73 percent of the pools surveyed.

No one means of access will fully meet the needs of all persons with disabilities. However, certain means of pool access provide independent operation to a broader range of people. These means include swimming pool lifts and sloped entries. Other means of access such as a transfer wall, transfer system, stairs, and moveable floors provide access for some people with disabilities. For example, stairs with handrails provide support for individuals who walk short distances and transfer systems serve individuals who prefer to transfer into the water without the use of a mechanical lift. When these means are combined with a pool lift or sloped entry, they serve a larger segment of the population of individuals with disabilities. For these reasons, larger pools, those with more than 300 linear feet of pool wall, are required to have at least two means of entry and exit to a pool. In larger swimming pools, multiple access points provide for greater safety and convenience to users, allowing some choice in methods of entering or exiting the pool.

15.8.2 Wading Pools

This section requires at least one accessible means of entry to be provided in wading pools. Acceptable means of entry are sloped entry, transfer wall, or transfer system. Unlike swimming pools, the size and depth of wading pools limits the options for access into the water. For example, the ANSI/NSPI-1 Committee is expected to require wading pool depths to be limited to 18 inches maximum. Where wading pools are less than 18 inches deep, a pool lift cannot be used.

Question 15: It has been suggested to the Board that it is inappropriate to require a means of access into a wading pool because the height of transfer walls and other transfer systems are considered to be hazardous to children. Based on these concerns, should the Board consider exempting these areas?

15.8.3 Spas

This section requires at least one accessible means of entry into spas. The means of entry must be a lift, transfer wall, or transfer system. Like a wading pool, size and depth limitations prohibit the use of certain means of entry into a spa. While a swimming pool lift is an option for a spa, a sloped entry may significantly impact size and designs for water containment.

An exception has also been added to address facilities where spas are provided in a cluster. The exception allows for five percent, but not less than one, in each cluster to be accessible. This application is consistent with the other requirements in ADAAG where multiple elements of the same type are clustered.

15.8.4 Swimming Pool Lifts

This section provides technical provisions for swimming pool lifts. The provisions provide specifications for the necessary clear deck space and seat orientation to ensure usability for persons with disabilities.

15.8.4.1 Seat Location

This section requires the centerline of the seat, when in the raised position, to be located over the deck and 20 inches minimum from the edge of the pool. The position of the lift seat is important for ease of operation and for safety. The location in relationship to the edge of the pool is especially important to facilitate safe transfers. The 20 inch minimum distance from the edge of the pool, allows space to transfer over the deck. Unsafe conditions created by locating the seat either over the water or too close to the deck edge were observed during the Board sponsored research project and were identified by research subjects as problems affecting access.

15.8.4.2 Clear Deck Space

This section requires a clear deck space on the side of the seat opposite the water. The space is measured from the seat. Clear space is required to be 30 inches wide minimum and 48 inches long minimum from a line located 12 inches behind the intersection of the seat and its back. The clear space is specified in relationship to the seat to allow unobstructed space for either side or diagonal transfer. The space must be

clear and free of deck braces that can interfere with transfer. Figure 71 shows the clear floor space, its position, and dimensions.

15.8.4.3 Seat Height

This section requires the height of a lift seat to be 16 inches minimum to 18 inches maximum above the deck floor. This height is to be measured from the deck to the top of the seat surface when the seat is in the raised (load) position. In addition to the clear deck space, lift seat height is also critical for transfer from a wheelchair or other mobility device. Several ADAAG provisions such as water closet seat height and bench height establish a transfer height of 17 to 19 inches for adults. Information obtained from the Board sponsored research project supported the heights established for other elements designed for transfer. A slight departure from this provision has been proposed to address the needs of children transferring to a lift seat. ADAAG 4.16.7 (Water Closets for Children) permits 11 inches minimum to 17 inches maximum to the top of a toilet seat height. An adjustable seat may accommodate the need for varying transfer heights for users of all ages.

15.8.4.4 Seat Width

This section requires a lift seat to be 16 inches wide minimum. This dimension is consistent with seat widths established for other seating elements and will accommodate a range of users. Each of the seats tested during the Board sponsored research project either met or exceeded this minimum requirement.

Question 16: Different types of seats are available on swimming pool lifts. The types include flexible sling seats, plastic or fiberglass seats, and larger stretcher designs that accommodate the entire body. Persons with disabilities involved in the Board sponsored research project expressed interest in all types of seats. The Board has not proposed any special technical provisions for the material of the seat. Should a certain type of seat be required on swimming pool lifts?

15.8.4.5 Footrests and Armrests

This section requires footrests to be provided and to move in conjunction with the seat. Many adult legs will extend beyond 16 to 18 inches below the lift seat. Without a footrest, users' feet will drag across the deck, potentially causing injury.

This section also requires that, if provided, the armrest opposite the water be removable or fold clear of the seat when the seat is in the raised (load)

position. This clearance is necessary to allow for transfer from a wheelchair or other mobility device. Armrests are not required on the lift seats because there is insufficient information to determine their usefulness and optimal design criteria. However, when provided, armrests may not obstruct transfer.

Question 17: Should armrests be required on swimming pool lifts? If so, please provide specific information regarding the appropriate size and location.

15.8.4.6 Operation

This section requires that a pool lift be capable of unassisted operation from both the deck and water levels. ADAAG requires that platform lifts provide unassisted operation. The need for independence is not diminished by the fact that the user operates a swimming pool lift. A large percentage of the respondents in the Board sponsored research project noted the importance of using a lift without assistance. Pool facility staff also indicated the importance of a device or design that could be used without pool staff assistance. Lifts that are operated manually do not offer independent use because they require an attendant to operate a crank which is unreachable by the lift user. In most cases, power-operated lifts can offer independent use.

This section also requires that controls and operating mechanisms be unobstructed when a lift is in use. This is also important for independent operation. Controls and operating mechanisms may not require continuous manual pressure for operation and must comply with ADAAG 4.27.4 which requires that operating controls not require tight grasping, pinching, or twisting of the wrist. Additionally, the controls may not require more than 5 lbf to operate. This is consistent with requirements for other accessible elements with operating mechanisms.

15.8.4.7 Submerged Depth

This section requires that a pool lift be designed so that the seat will submerge to a water depth of 18 inches minimum. This depth is necessary to ensure buoyancy for the person on the lift seat once in the water. Data relating to buoyancy levels was provided through the Board sponsored research project. A diverse group of persons with disabilities were tested to establish minimum levels of buoyancy with a sloped entry and a lift.

15.8.4.8 Lifting Capacity

This section requires that single person pool lifts provide a minimum

weight capacity of 300 lbs. Lifts also must be capable of sustaining a static load of at least three times the rated load. ANSI A17.1 for platform lifts (Rule Number 2002.7A) requires a minimum weight capacity of 250 lbs. for single seat lifts. Data from the Board sponsored research project indicated that the 250 lbs. may be insufficient. Swimming pool lifts used at two of the facilities for on-site testing were replaced because of weight damage. Breakdowns and injuries due to insufficient weight capacity of pool lifts were cited in the telephone interviews of pool facility staff and people with disabilities. Based on this information, the weight capacity is proposed at 300 lbs. for single person lifts, with the capability of sustaining a static load of at least three times the rated load. This requirement was also supported by several pool lift manufacturers who provided advice during the Board sponsored research project.

15.8.5 Sloped Entries

This section provides technical provisions for sloped entries. These proposed technical provisions provide requirements for more gradual sloped entries, commonly referred to as beach entry, zero grade entry, or in-the-water ramps. Due to the similarities of this type of entry with ramps used in other buildings and facilities, provisions in ADAAG have been referenced accordingly.

The use of an aquatic chair or other type of water resistant chair is important for use of a pool ramp and other sloped entries to gain access into the water. Use of personal wheelchairs or power chairs in the water can create safety and health hazards. Provisions regarding aquatic chairs cannot be included in ADAAG. The provision of such chairs, however, may be subject to the Department of Justice ADA regulations.

15.8.5.1 Sloped Entries

This section requires sloped entries designed to provide access into the water to comply with most of the provisions of ADAAG 4.3 (Accessible Route). Where a sloped entry has been designed to provide access into the water, it must provide an accessible route. This requires that when the slope of the entry exceeds 1:20, the provisions of ADAAG 4.8 (Ramps) are applied.

15.8.5.2 Submerged Depth

This section modifies the requirements of ADAAG 4.3 and requires sloped entries designed to provide access into the water to extend to a depth of 24 inches minimum to 30 inches maximum below the stationary

water level. This requirement is consistent with the submerged depth requirement for swimming pool lift seats in the water. As indicated in 15.8.4.7, the Board sponsored research project provided data related to buoyancy levels necessary for a variety of subjects with disabilities. Mean buoyancy and mean seated height were calculated to determine the buoyancy point and water depth at which subjects became buoyant or floated off their wheelchairs. While there was limited testing with children, anthropometric data indicated that a water depth exceeding 30 inches would be over the mouth and nose of an average 9 year old child.

This section also requires that at least one landing be located 24 inches minimum to 30 inches maximum below the stationary water level. The requirement for landings applies to sloped entries when the slope exceeds 1:20 and the entry must comply with the provisions for ramps. Beach access or zero grade entries do not have slopes in excess of 1:20 and are not required to have landings. When beach access or zero grade entry is provided, the entry must extend to a depth of 24 inches minimum to 30 inches maximum below the stationary water level.

Since wading pools are less than 24 to 30 inches deep, an exception provides that sloped entries are only required to extend to the deepest part of the wading pool.

15.8.5.3 Handrails

This section requires handrails on all sloped entries. The clear width between handrails must be between 33 inches minimum and 38 inches maximum. Information from on-site testing and interviews in the Board sponsored research project indicated a need for handrails on both sides of a sloped entry, regardless of whether mobility aids were used. Pool operators also indicated that two handrails were most often found on pool ramps. Further, while a gradual sloped entry (beach or zero grade entry) increased usability for many individuals, handrails were especially important given the travel distance to sufficiently deep water. Handrails on both sides of ramps are necessary for individuals with limited use of one arm. In light of concerns regarding underwater obstructions, an exception is provided for handrail extensions required at the bottom landing of a pool ramp.

15.8.6 Transfer Walls

This section provides technical provisions for transfer walls. Transfer walls provide a surface at the edge of a

pool for transfer into the water. Transfer walls may be elevated walls at the pool edge or lowered sections of the deck. A transfer wall is a secondary means of access into the water and must be combined with a lift or sloped entry. A transfer wall is proposed to be a secondary, not a primary means of access, because this method of entry requires significant upper body strength.

15.8.6.1 Clear Deck Space

This section requires clear deck space of 60 inches minimum by 60 inches minimum to be provided at the base of a transfer wall. Clear space is needed to allow individuals to transfer and maneuver from their wheelchair or mobility device. Where one grab bar is provided on a transfer wall, the clear deck space must be centered on the grab bar. This allows sufficient space for a transfer on either side of the grab bar. Where two grab bars are provided, the clear deck space must be centered on the clearance between the grab bars. This requirement provides sufficient space between grab bars for transfer. Section 15.8.6.5 provides additional requirements for grab bars, including spacing.

15.8.6.2 Height

This section requires the height of transfer walls to be 16 inches minimum to 18 inches maximum measured from the deck below. The height requirement is consistent with proposed requirements for pool lift seat heights at 15.8.4.3 and similarly addresses the needs of some children.

15.8.6.3 Wall Depth

This section requires the depth of a transfer wall to be 12 inches minimum to 16 inches maximum. As a minimum, the 12 inch depth of the transfer wall provides adequate space for a person to comfortably sit on the surface of the wall. The wall depth is limited to 16 inches maximum so that users are not required to traverse the wall to transfer to the water.

15.8.6.4 Surface

This section requires the surface of a transfer wall to be free of sharp edges. This is necessary to reduce the potential for injury when individuals move across the surface of the wall. Sharp edges may result in abrasions and other injuries.

15.8.6.5 Grab Bars

This section requires at least one grab to be provided on a transfer wall. Similar to other elements which require transfer, a grab bar is necessary to assist users to transfer to and from the transfer wall. Grab bars also facilitate transfer to

and from the water. Grab bars are required to be perpendicular to the pool wall and extend the full depth of the wall. The top of the gripping surface must be 4 inches maximum above the wall. Where two grab bars are provided, clearance between grab bars must be 22 inches minimum. Where one grab bar is provided, clearance must be 22 inches minimum on both sides of the grab bar. Grab bars must comply with ADAAG 4.26.

15.8.7 Transfer Systems

This section provides technical provisions for transfer systems used as a means of access into the water. A transfer system consists of a transfer surface, combined with a series of transfer steps that descend into the water. Users must transfer from their wheelchair or mobility device to a surface and continue transferring from step to step.

Transfer systems have been used in play areas for the past several years to provide access to elevated structures. While it has been an important method for some children to gain access to an elevated play structure, it is limited to use by persons who are able to transfer, with or without assistance. Transfer systems are not considered a primary means of access because they require sufficient upper body strength to transfer independently, or assistance must be provided. A transfer system may only be used as a secondary means of access in a larger pool with 300 linear feet or more of pool wall and must be combined with either a lift or a sloped entry.

15.8.7.1 Transfer Platform

This section requires a transfer platform to be 19 inches deep minimum by 22 inches wide minimum. Transfer platforms must be provided at the head of each transfer system. The transfer platform is the first point of transfer from a wheelchair or mobility device before entering the water. The minimum width and depth is necessary to comfortably sit on the platform.

15.8.7.2 Clear Deck Space

This section requires a clear deck space of 60 inches wide minimum by 60 inches long minimum with a slope not steeper than 1:48 at the base of the transfer platform. A level unobstructed space at the base of the transfer platform, centered along the 22 inch side, is necessary to facilitate a transfer from a wheelchair or mobility device. The clear space requirement is consistent with spaces also needed at the base of a transfer wall.

15.8.7.3 Height

This section requires the height of transfer platforms to be 16 inches minimum to 18 inches maximum measured from the deck. This height requirement is consistent with other elements used to provide access into the water.

15.8.7.4 Transfer Step Risers

This section requires transfer step risers to be 7 inches maximum in height. It also requires that transfer step risers extend to a water depth of 18 inches minimum. Based on the Board sponsored research project, a 7 inch maximum step riser was considered to be a comfortable transfer height when moving from step to step. The 18 inch minimum depth requirement is consistent with the buoyancy data obtained from on-site testing completed during the Board sponsored research project.

15.8.7.5 Surface

This section requires the surface of a transfer system to be free of sharp edges. Similar to other transfer surfaces, this is necessary to reduce the potential for injury. Sharp edges may result in abrasions and other injuries.

15.8.7.6 Size

This section requires each transfer step to have a tread depth of 12 inches minimum and 17 inches maximum. A 22 inch minimum tread width is also required. A minimum tread depth and width is necessary to ensure adequate space for movement on transfer steps.

15.8.7.7 Grab Bars

This section requires one grab bar on each step to be located so that the grab bar does not obstruct transfer at either a transfer platform or a transfer step. The top of the gripping surface must be 4 inches maximum above each step. Grab bars must comply with ADAAG 4.26.

15.8.8 Pool Stairs

This section provides technical provisions for pool stairs used as a means of entry and exit to the water. Stairs may only be used as a secondary means of access in a larger pool with 300 linear feet or more of pool wall and must be combined with either a lift or a sloped entry.

15.8.8.1 Pool Stairs

This section requires pool stairs to comply with ADAAG 4.9 (Stairs), except as modified. ADAAG 4.9 has been referenced since stairs in pools are used in a similar manner as stairs elsewhere. Unlike transfer steps which are

designed for individuals to use in a seated position, pool stairs are used by individuals who walk.

15.8.8.2 Handrails

This section requires the width between handrails to be 20 inches minimum to 22 inches maximum. To reduce the potential for underwater protrusions, handrail extensions required by ADAAG 4.9.4 are not required at the bottom landing serving a pool stair. The handrail width provides users who are ambulatory the opportunity for support. During the Board's work with the ANSI/NSPI-1 Public Pool Standard Committee, pool designers supported this requirement based on their experience and preferences from users. The width requirement is similar to the grab bar configuration required in ADAAG Figure 30(b) (Alternate Stalls).

15.8.9 Moveable Floors

This section requires that the pool coping comply with ADAAG 4.5.2 where a moveable floor connects with a pool deck. Moveable floors in pools are designed in several ways. In some cases, the entire pool floor or only a section of the floor is raised or lowered to the desired depth. Hydraulic pistons are used to slowly move the floor. When the floor is raised to deck level, people can either walk or roll their wheelchair or mobility device onto the pool floor and then be lowered to the desired water depth.

The ANSI/NSPI/WWA-9 Committee is developing new standards for public pools and water sources for aquatic recreation facilities. This includes wave pools, activity pools, leisure rivers, and other facilities often found in water parks. This standard will not address conventional swimming pools, pools for competitive aquatic sports, and wading pools which are covered by ANSI/NSPI-1. ADAAG will apply to all swimming pools and aquatic recreation facilities. The proposed guidelines provide designers with a choice of options of how to provide access. For example, while moveable floors may not be appropriate for a wave pool, sloped entries have been used as a means of access into water. Designers and operators can select the means of access appropriate to the design and function of the pool.

Question 18: Are there specific features within aquatic recreation facilities where it is technically infeasible in new construction to comply with the proposed requirements in 15.8? If so, the Board is interested in specific examples of why this is not feasible, along with alternatives to

providing access for persons with disabilities.

Other Issues

The sports subcommittee recommended that separate accessible unisex toilet and changing facilities be provided in sports facilities. This was based on the concern that some individuals with disabilities use the assistance of persons of the opposite sex and require a toilet or bathing facility that accommodates both persons. The Board is aware of this concern and has worked with model building code organizations to develop scoping provisions for accessible unisex toilet facilities. These provisions will likely be incorporated into State and local building codes. It is anticipated that this would be required in assembly and mercantile occupancies where an aggregate of six or more fixtures (e.g., toilets for either men or women) are provided. Assembly occupancies include, but are not limited to, theaters, museums, nightclubs, stadiums, amusement parks, restaurants, health clubs, and transportation facilities.

Question 19: Multi-head showers, often referred to as "gang" showers, can be designed to meet the requirements in ADAAG 4.21, which requires grab bars on three sides. Is this location of the grab bars useful in multi-head showers? If not, what design would be most useful?

Question 20: The Board has not proposed exceptions for existing conditions where recreation facilities are altered. Some exceptions will be necessary to address elements and features where unique conditions prevent accessibility according to new construction requirements. Commenters are encouraged to recommend exceptions where necessary. Please provide an explanation of the problem and the solution, including costs and benefits associated with recommended exceptions.

Question 21: Some wheelchairs designed for wheelchair sports have a longer or wider wheelbase than those designed for everyday use. The Board is interested in obtaining more information about the dimensions of sports wheelchairs and any issues related to their use in sports facilities complying with ADAAG. Do existing ADAAG requirements for door widths, maneuvering clearances, or clear floor space allow for use of such wheelchairs? If not, please provide specific information regarding problems experienced and how these problems have been addressed.

Question 22: The Department of Justice's ADA regulations require that

public entities and places of public accommodation ensure effective communications so that persons with visual and hearing impairments can obtain information about programs, services, activities, and facilities. The Board has examined sports facilities to determine if ADAAG adequately addresses access to communications in various types of sports facilities. There are areas in sports facilities where information is communicated to players, coaches, and spectators via fixed communications systems. Examples include screens displaying scoring information and public address announcements. The Board seeks further information on specific concerns not currently addressed by ADAAG regarding communication accessibility in recreation facilities. The Board wishes to explore accessible communication technologies that are fixed building elements. Please also provide information about accessibility issues related to fixed, inaccessible communication systems.

Question 23: On April 30, 1998, the Access Board published proposed accessibility guidelines for play areas (63 FR 24080). During the comment period, several commenters requested clarification on the application of the proposed accessibility guidelines to water play components. Some play components have mechanisms that squirt water. In some facilities, including neighborhood parks and other recreation facilities, these water play components are not located in a swimming or wading pool and, therefore, would be considered ground-level play components. Sections 16.1.1(1) and 16.1.5 of the proposed accessibility guidelines for play areas would require one of each type of ground-level play component to be accessible and be connected by an accessible route. In other facilities, water play components are located in swimming and wading pools. For example, wading pools designed for small children often include water play components. Section 15.8.1 of this proposed rule would require an accessible means of entry into each public use and common use swimming pool. Should the Board develop additional provisions to more specifically address access to these water play components? If so, please provide specific examples of the type of guidance required.

Regulatory Process Matters

Executive Order 12866: Regulatory Assessment

This proposed rule is a significant regulatory action under Executive Order 12866 and has been reviewed by the Office of Management and Budget. The Administrator of the Office of Information and Regulatory Affairs of the Office of Management and Budget considers the proposed rule to be a major rule under the Congressional Review Act (5 U.S.C. 801 *et seq.*). The Board has assessed the potential costs and benefits of the rule. For each type of facility covered by the rule, the Board has analyzed data on the number of existing facilities, number of new facilities projected to be built each year, current design and construction practices, construction costs, and any additional costs expected to result from the rule. For some facility types, sufficient data was not available to conduct a complete analysis. The data is summarized below. The Board invites comment on the data and seeks additional data as indicated below.

Amusement Rides

There are approximately 200 amusement and theme parks in the United States. These facilities operate a variety of amusement rides, whose costs typically range from \$90,000 to \$600,000. Theme park rides and roller coasters are usually unique and cost millions of dollars. There is limited data available on capital investment for new amusement rides. In a trade association survey, 10 amusement facilities projected capital investments totaling \$267 million in 1997, and approximately the same number of facilities projected \$140 million in 1998. These figures include the construction of concession stands and other facilities, in addition to amusement rides. Based on this limited data and assuming an average cost of \$345,000 for an amusement ride, it is estimated that there are 590 new rides annually. This represents 3 new rides for existing amusement facilities each year.

The Board seeks additional data from owners and operators of amusement rides on the number of new amusement and theme parks expected to be constructed in the next five years, the number and types of rides expected to be provided at these new facilities, the number and types of rides expected to be added each year to existing facilities, and the costs of the rides. The Board also seeks information on current design and construction practices for providing access to new rides.

Industry sources estimate that the cost for providing a wheelchair space on an amusement device ranges from \$4,500 to \$150,000 and the cost for providing a transfer seat ranges from \$15,000 to \$100,000. Industry sources further estimate that the cost for providing a wheelchair storage space for each transfer seat ranges from \$0 to \$5,000 for ground-level load and unload areas, and from \$20,000 to \$60,000 for elevated load and unload areas. Some of these estimates appear to be based on retrofitting existing rides to provide access. Designing new rides to provide access from the conceptual phase onward usually results in much less cost. For example, incorporating a 30 inch by 48 inch minimum clear floor space for storing a wheelchair in the design of an elevated load and unload area should cost a lot less than \$20,000 to \$60,000. The Board seeks additional data on the costs for providing wheelchair spaces and transfer seats on amusement devices where these designs are incorporated in the conceptual phase of the ride.

Boating Facilities, and Boat and Ferry Docks

There are approximately 10,375 marinas and 1.1 million boat slips in the United States. New boating facilities incorporate wider piers and pier clearances in their designs and the proposed provision for accessible boat slips is not expected to result in any increase in costs. The proposed provision for gangways connecting floating platforms will have a cost impact. The cost will depend on the size of the facility and water level change. Small facilities and facilities with high water level changes are permitted to exceed a 1:12 maximum slope under the conditions specified in Table 15.2.1. Cost estimates were prepared by engineers for constructing gangways for various water level changes with and without maintaining a 1:12 maximum slope to determine the incremental costs resulting from the proposed rule. Actual construction costs in a competitive bid environment may vary up to 50 percent above or below these engineering estimates. Cost estimates were prepared for four regions of the country and national averages used. The incremental costs were compared to the total construction costs for boating facilities, which are assumed to be \$40 per square foot. Land acquisition is not included in the construction costs.

For a boating facility with 10 slips and 2,450 square feet of fixed and floating piers, the gangway would have to maintain a 1:12 maximum slope for water level changes up to 2.5 feet. The

total construction cost for the facility is estimated at \$99,600. The incremental cost for maintaining a 1:12 maximum slope when the water level change is 2.5 feet is \$1,825, or 1.8 percent of the total construction costs.

For a boating facility with 100 slips and 20,550 square feet of fixed and floating piers, the gangway would have to maintain a 1:12 maximum slope for water level changes up to 12.5 feet. The total construction cost for the facility is estimated at \$822,000. The incremental cost for maintaining a 1:12 maximum slope varies directly with the water level change. For a 2.5 feet water level change, the incremental cost is \$1,825 or 0.2 percent of the total construction cost; for a 5 feet water level change, the incremental cost is \$12,769 or 1.5 percent of the total construction cost; for a 7.5 feet water level change, the incremental cost is \$42,881 or 5.2 percent of the total construction cost; for a 10 feet water level, the incremental cost is \$62,956 or 7.6 percent of the total construction cost; and for a 12.5 feet water level change, the incremental cost is \$110,406 or 13.4 percent of the total construction cost.

The Board seeks data from owners and operators of boating facilities on the number of new boating facilities with floating platforms expected to be constructed in the next five years, the size of the facilities (total square feet of fixed and floating piers), water level changes at the facilities, and costs of the facilities.

Boat and ferry docks that consist of floating platforms also would have to comply with the gangway provision. The Board seeks the same data for boat and ferry docks as requested above for boating facilities.

Fishing Piers and Platforms

There is limited data available on the number of fishing piers and platforms in the United States. The National Marine Fisheries Service lists 3,000 saltwater fishing sites on the East Coast and Gulf of Mexico, excluding Florida and Texas. These sites include piers, beaches, jetties, marinas, and bridges. The Army Corps of Engineers has constructed 413 fishing piers and docks which are usually operated by public and private entities.

New fishing facilities have wider piers and platforms and the proposed provisions for clear space and maneuvering space are not expected to result in any increase in costs. The proposed rule does not require new fishing facilities to provide railings. However, if railings are provided, the proposed rule sets a maximum height for a portion of the railings and also

requires edge protection to extend at least 2 inches above the ground or deck surface. The cost of this requirement is negligible when compared to the total cost of the facility.

New fishing facilities that consist of floating platforms will have to comply with the same maximum slope requirements for gangways as do boating facilities with floating platforms. The Board seeks data from owners and operators of fishing facilities on the number of new fishing facilities with floating platforms expected to be constructed in the next five years, the size of the facilities (total square feet of fixed and floating piers), water level changes at the facilities, and costs of the facilities.

Golf

There are approximately 11,300 public and municipal golf courses in the United States. Based on the number of new golf courses opened between 1992 and 1997, the rate of new construction is projected at 3.8 percent, or about 430 new golf courses annually. Most recently constructed golf courses meet the proposed provisions for a golf car passage, teeing grounds, putting greens, and driving ranges and practice tees. Industry sources have indicated that the proposed rule is expected to have minimal to negligible cost impact on the construction of new golf courses.

Miniature Golf

There are 3,000 to 4,000 miniature golf courses in the United States. Miniature golf course lots vary considerably in size. There is a trend to design courses with elevated holes. One designer typically uses 29,000 square feet for an 18 hole course, with an average hole size of 360 square feet. Land costs range from \$3 to \$15 per square foot. Holes and paths typically consist of concrete or brick, and cost from \$1 to \$3 per square foot. The Board seeks additional data on the number of new miniature golf courses expected to be constructed in the next five years, the size of the facilities, and total project costs, including land, materials, and labor.

The cost impact of the proposed rule will vary based on the elevation change and hole design of the miniature golf course. The proposed rule would require at least 50 percent of elevated holes to be accessible. The proposed rule also allows holes to be designed so that wheelchair users can hit the ball from an accessible route adjacent to the hole instead of providing an accessible route through the hole. One designer estimates that it will cost 5 percent to 45 percent more to connect holes with

an accessible route. Designers will plan miniature golf courses differently based on accessibility requirements. The Board seeks information on designs that will comply with the proposed rule, meet the objectives of miniature golf course operators, and make optimum use of space. Commenters should identify differences in space usage from current design practices and the method for estimating additional costs attributed to the proposed rule.

Sports Facilities

The proposed rule adds several exceptions to existing ADAAG provisions for certain sports facilities. There is no cost associated with these exceptions. The proposed rule also includes provisions for exercise equipment and machines, bowling lanes, shooting ranges, sauna and steam rooms, and locker rooms. There are approximately 13,800 health and fitness clubs; 6,700 bowling centers; and 6,400 shooting ranges in the United States. In addition, hotels and motels, schools, colleges and universities, and public parks and recreation programs often have exercise equipment and machines, sauna and steam rooms, and locker rooms as part of their facilities. Industry sources have indicated that the proposed rule is expected to have negligible impact on the construction of these new sports facilities.

Swimming Pools, Wading Pools, and Spas

There is no data available on the number of commercial swimming pools in the United States. One manufacturer estimates that about 2,500 new commercial swimming pools are constructed each year. Most commercial swimming pools have less than 300 linear feet of pool wall. Schools, colleges and universities, and public parks and recreation programs usually construct pools having more than 300 linear feet of pool wall. Assuming a unit cost of \$142 per square foot, a 5,000 square foot pool would cost \$.7 million and a 10,000 square foot pool would cost \$1.4 million. The Board seeks additional data on the number of commercial swimming pools constructed each year, the size of the pools, and their costs. The Board also seeks information on the extent to which an accessible means of entry is currently provided to newly constructed pools.

The costs for the various accessible means of entry to a swimming pool range from \$2,860 to \$7,500 for swimming pool lifts; \$8,282 to \$11,000 for sloped entries; \$3,600 to \$4,000 for transfer walls; \$864 to \$3,000 for

transfer systems; \$2,413 to \$3,000 for pool stairs; and \$200,000 to \$500,000 for movable floors.

The proposed rule would require swimming pools which have less than 300 linear feet of pool wall to provide at least one accessible means of entry to the pool. If a swimming pool lift costing \$5,200 is used, the additional cost would be 0.7 percent of the total construction cost for a 5,000 square foot pool. Assuming that 80 percent of new pools have less than 300 linear feet of pool wall, it would cost \$10.4 million annually to provide swimming pool lifts for these 2,000 new pools.

The proposed rule would require swimming pools which have 300 linear feet or more of pool wall to provide at least two accessible means of entry to the pool. If a swimming pool lift costing \$5,200 and a transfer system costing \$2,400 are used, the additional cost would be 0.5 percent of the total construction cost for a 10,000 square foot pool. Assuming the other 20 percent of new swimming pools have 300 linear feet or more of pool wall, it would cost another \$3.8 million annually to provide swimming pool lifts and transfer systems for those 500 new pools.

The proposed rule also would require an accessible means of entry to wading pools and commercial spas. The Board seeks data on the number of new wading pools and commercial spas constructed each year and their costs. The Board also seeks information on the means currently used to provide access to wading pools and commercial spas, and the costs for providing access.

Benefits

The proposed rule is issued pursuant to the Americans with Disabilities Act (ADA) to eliminate discrimination against individuals with disabilities. In enacting the ADA, Congress expressly found that architectural, transportation and communication barriers result in discrimination against individuals with disabilities. The proposed rule will ensure that new recreation facilities are readily accessible to and usable by individuals with disabilities. As new recreation facilities are designed and constructed to be accessible, individuals with disabilities will enjoy the benefits of these facilities. Operators of recreation facilities will experience increased usage and patronage by individuals with disabilities. The proposed rule also establishes the basis for uniform standards for accessibility to recreation facilities. Designers and manufacturers will have a clear and consistent set of standards with which to work. Establishing uniform standards

for accessibility has resulted in innovation and new designs that are cost effective and beneficial to everyone.

Regulatory Flexibility Act: Initial Regulatory Flexibility Analysis

The Board has prepared this initial regulatory flexibility analysis for purposes of the Regulatory Flexibility Act to describe the impact of the proposed rule on small entities.

Reason for, Objectives of, and Legal Basis for Proposed Rule

This proposed rule is issued under the authority of the Americans with Disabilities Act (ADA), which requires the Board to issue guidelines to ensure that buildings, facilities, and vehicles are accessible, in terms of architecture and design, transportation, and communication, to individuals with disabilities. Recreation facilities are specifically covered by the ADA. In enacting the ADA, Congress expressly found that individuals with disabilities continually encounter various forms of discrimination, including the discriminatory effects of architectural, transportation, and communication barriers. Among the purposes of the ADA is to provide clear and consistent standards addressing discrimination against individuals with disabilities.

The Board initially issued the Americans with Disabilities Act Accessibility Guidelines (ADAAG) in 1991. ADAAG contains scoping provisions and technical specifications for designing parking areas, entrances, toilet rooms, and other elements and spaces that typically comprise a building and its site so that individuals with disabilities will have ready access to and use of the facility. Amusement rides, boating and fishing facilities, golf courses, miniature golf, sports facilities, swimming pools, wading pools, and spas have some unique features which are not adequately addressed by ADAAG. Additional guidelines are needed for providing access to these features. The proposed rule would add provisions to ADAAG to address these features.

Description and Estimate of Number of Small Entities to Which the Proposed Rule Will Apply

The proposed rule will apply to small entities in the services industries. The Small Business Administration defines small entities for the services industries as those having \$5 million or less in annual receipts. The number of small entities to which the proposed rule will apply are included in the following categories of the Standard Industrial Classification (SIC) system:

(1) Amusement parks (SIC 7996). Census data indicate that 711 out of 753 firms have less than \$5 million in annual receipts.

(2) Marinas (SIC 4493). Census data indicate that 3,600 out of 3,675 firms have less than \$5 million in annual receipts.

(3) Golf Courses (SIC 7992). Census data indicate that 3,525 out of 3,560 firms have less than \$5 million in annual receipts.

(4) Physical fitness facilities (SIC 7991). Census data indicate that 8,116 out of 8,169 firms have less than \$5 million in annual receipts.

(5) Membership sports and recreation clubs (SIC 7997). Census data indicate that 6,828 out of 6,929 firms have less than \$5 million in annual receipts.

(6) All other amusement and recreation services (SIC 7999). Census data indicate that 21,078 out of 21,312 firms have less than \$5 million in annual receipts. This category is over broad and includes entities such as bingo parlors, karate instruction, ping pong parlors, bicycle rental, scuba and skin diving instruction, and yoga instruction, which are not affected by the proposed rule.

The following entities would also be affected by the proposed rule to the extent that they provide exercise equipment, swimming pools, and other recreational facilities covered by the rule.

(7) Sporting and recreational camps (SIC 7032). Census data indicate that all 2,812 firms are small entities.

(8) Elementary and secondary schools (SIC 8211). Census data indicate that 13,335 out of 14,882 private firms are small entities.

(9) Colleges, universities, and professional schools (SIC 8221). Census data indicate that 947 out of 2,063 private firms are small entities.

(10) Junior colleges and technical institutes (SIC 8222). Census data indicate that 353 out of 543 private firms are small entities.

(11) Hotels and motels (SIC 7011). Census data indicate that 34,417 out of 36,695 firms are small entities.

In addition, the proposed rule would apply to public parks and recreation programs, public elementary and secondary schools, and public colleges and universities that provide exercise equipment, swimming pools, or other recreation facilities covered by the rule. For purposes of the Regulatory Flexibility Act, a governmental jurisdiction is considered a small entity if it has a population of less than 50,000. The National Recreation and Park Association estimates that there are 4,800 public park and recreation

departments in the United States. The U.S. Department of Education reports that there are 85,393 public elementary and secondary schools, and 1,625 public colleges and universities. The Board seeks information on the number of these public programs which are part of governmental jurisdictions having a population less than 50,000.

Description of Reporting, Record Keeping, and Other Compliance Requirements

The proposed rule establishes accessibility guidelines for the design and construction of new recreation facilities. The guidelines also apply to alterations to recreation facilities. The guidelines apply to altered parts of a facility subject to alteration provisions in ADAAG 4.1.6, including the exception for when compliance is technically infeasible. There are no reporting or record keeping requirements.

The provisions of the proposed rule are discussed in detail in the Section-by-Section Analysis of the preamble. The provisions are summarized briefly below. Amusement rides would be required to provide one wheelchair space and one transfer seat for each 100 fixed seats. An exception is provided for amusement rides where it is not operationally or structurally feasible to provide wheelchair spaces, in which case two transfer seats would be required for each 100 fixed seats. The proposed rule includes technical specifications for wheelchair spaces, transfer seats, accessible loading and unloading areas, wheelchair storage space, and signage.

Boating facilities with floating platforms would be permitted to exceed a 1:12 maximum slope under certain conditions specified in Table 15.2.1 relating to size of the facility and change in water level. At least 3 percent of boat slips would have to be accessible. The proposed rule includes technical specifications for accessible boat slips. Floating fishing piers and platforms would have to comply with the same provisions for gangways as do boating facilities. Where railings are provided at fishing facilities, at least 25 percent of the railings would have to be 32 inches maximum above the ground or deck surface, and edge protection would have to be provided. The proposed rule includes technical specifications for clear space and maneuvering space on fishing piers or platforms.

Golf courses would be permitted to provide a golf car passage on which a motorized golf car can operate in lieu of an accessible route. The proposed rule includes scoping provisions and

technical specifications for teeing grounds, putting greens, driving ranges and practice tees, and weather shelters. The proposed rule also addresses miniature golf courses. Where elevated holes are provided on a miniature golf course, at least 50 percent of those holes would have to be connected by an accessible route. All other holes would have to be on an accessible route. The proposed rule also allows holes to be designed so that wheelchair users can hit the ball from an accessible route adjacent to the hole instead of providing an accessible route through the hole.

At least one of each type of exercise equipment would have to be served by an accessible route and have a clear floor space positioned for transfer or for use by an individual seated in a wheelchair. At least 5 percent of bowling lanes and fixed firing positions at shooting ranges would have to be accessible.

Swimming pools having less than 300 linear feet of pool wall would have to provide at least one accessible means of entry to the pool, and swimming pools having 300 linear feet or more of pool wall would have to provide at least two means of accessible entry to the pool. Wading pools and spas also would have to provide at least one accessible means of entry. The proposed rule includes technical specifications for the following accessible means of entry to pools: swimming pool lifts, slopped entries, transfer walls, transfer systems, pool stairs, and moveable floors.

Other Federal Rules Which May Duplicate, Overlap, or Conflict With the Proposed Rule

Under the ADA, the Department of Justice is responsible for issuing regulations to implement the law. The Department of Justice's ADA regulations are required to include standards for the accessible design of facilities, which must be consistent with ADAAG. Thus, the Department of Justice is expected to amend its ADA regulations at a future date based on the Board's amendments to ADAAG. The Department of Justice's ADA regulations, not ADAAG, are enforceable under the ADA.

Description of Steps Taken To Minimize Any Significant Economic Impact of the Proposed Rule on Small Entities

The proposed rule is issued to implement the ADA, which requires newly constructed and altered facilities to be accessible to individuals with disabilities. By nature of the ADA, ADAAG has universal applicability to all newly constructed and altered facilities covered by the law. In

developing the proposed rule, the Board sought the advice and recommendations of an advisory committee representing the various interests affected by the rule, published an advance notice of proposed rulemaking seeking comment on the advisory committee's recommendations, and considered current design and construction practices for the types of facilities addressed by the rule and the potential cost impact of the rule.

The proposed rule is expected to have minimal or negligible impact on the design and construction of new golf courses, bowling centers, shooting ranges, and facilities providing exercise equipment and machines, sauna and steam rooms, and locker rooms. For swimming pools, the number of accessible means of entry to the pool is based on the size of the pools.

Swimming pools having less than 300 linear feet of pool wall would have to provide at least one means of accessible entry to the pool. The additional cost for providing an accessible means of entry is expected to be less than 1 percent of the total construction for a swimming pool.

For boating and fishing facilities, the proposed rule is not expected to have any impact on the design and construction of boat slips and pier clearances. The exception permitting gangways to floating piers and platforms to exceed the 1:12 maximum slope is based on the size of the facility and water level change as set out in Table 15.2.1. The table was developed to minimize the cost impact on smaller facilities and facilities having greater water level changes. The cost data is summarized above under Executive Order 12866: Regulatory Assessment.

For miniature golf courses, to minimize the cost impact, the proposed rule would require at least 50 percent of elevated holes and each level hole to be accessible. The Board requests specific guidance in the preamble on how to differentiate between level and elevated holes.

As explained under Executive Order 12866: Regulatory Assessment, there is limited data available on amusement rides. The Board is requesting additional data from owners and operators of amusement rides during the comment period on the proposed rule and will fully analyze any additional data provided before issuing a final rule. The Board seeks information on the economic impact of the proposed rule on small entities who plan to design or construct new amusement rides and any regulatory alternatives that would minimize the impact and still achieve the statutory objective of providing

access to such facilities for people with disabilities.

The Board invites comment on this initial regulatory flexibility analysis.

Executive Order 12612: Federalism

The proposed rule is issued under the authority of the Americans with Disabilities Act. Ensuring the civil rights of individuals with disabilities has been recognized as a responsibility of the Federal government. The proposed rule does not otherwise affect the relationship between the Federal government and the States or the distribution of power and responsibilities among the various levels of government to warrant an assessment of federalism implications under Executive Order 12612.

Executive Order 12875: Intergovernmental Partnership

The Board has involved organizations representing the various interests affected by the proposed rule in the development of the rule. The Recreation Access Advisory Committee included representatives of State and local governments. Notices of advisory committee meetings were disseminated widely and interested persons were encouraged to attend the meetings. The report of the advisory committee's recommendations has been distributed to entities that will be affected by the rule and is one of the Board's most frequently requested publications. The Board published an advance notice of proposed rulemaking requesting comments on the advisory committee's report and received comments from all sectors, including State and local governments. In addition to requesting comments on the proposed rule, the Board will hold a public hearing on the rule to give all interested persons an additional opportunity to share their views regarding the rule with the Board.

Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act does not apply to proposed or final rules that enforce constitutional rights of individuals or enforce any statutory rights that prohibit discrimination on the basis of race, color, sex, national origin, age, handicap, or disability. Since the proposed rule is issued under the authority of the Americans with Disabilities Act, an assessment of the rule's effects on State, local, and tribal governments, and the private sector is not required by the Unfunded Mandates Reform Act.

List of Subjects in 36 CFR Part 1191

Buildings and facilities, Civil rights,
Individuals with disabilities,
Transportation.

June I. Kailes,

*Chair, Architectural and Transportation
Barriers Compliance Board.*

For the reasons stated in the preamble, the Architectural and Transportation Barriers Compliance Board proposes to amend Part 1191 of title 36 of the Code of Federal Regulations as follows:

**PART 1191—AMERICANS WITH
DISABILITIES ACT (ADA)
ACCESSIBILITY GUIDELINES FOR
BUILDINGS AND FACILITIES**

1. The authority citation for 36 CFR part 1191 continues to read as follows:

Authority: 42 U.S.C. 12204.

Appendix A to Part 1191—[Amended]

2. Appendix A to part 1191 is amended as follows:

a. In section 3.5, add definitions for "Amusement Device," "Amusement Ride," "Area of Sport Activity," "Boat Launch Ramp," "Boat Slip," "Design High Point," "Gangway," "Golf Car Path," and "Teeing Ground" in alphabetical order.

b. In section 4.1.1, remove the word "or" at the end of the paragraph 5(b)(ii); add the word "or" at the end of paragraph 5(b)(iii); and add a new paragraph 5(b)(iv).

c. In section 4.1.2, redesignate paragraph 2 as paragraph 2(a); add a new paragraph 2(b); add an exception after paragraph 2(b); add an exception after paragraph (3); and add two exceptions after paragraph (4).

d. In section 4.1.3, add a new paragraph (12)(c); add an exception after paragraph (13); add an exception after paragraph (19)(a), add a new paragraph (19)(c); revise paragraph (21); add an exception after paragraph (21); add a new paragraph (22); and add an exception after paragraph (22).

e. Revise the heading of section 4.35, and revise sections 4.35.1 and 4.35.4.

f. Add new section 4.36.

g. Add new section 4.37.

h. Add new section 10.5.

i. Add new section 15.

The additions and revisions read as follows:

**Appendix A to Part 1191—Americans
With Disabilities Act (ADA)
Accessibility Guidelines for Buildings
and Facilities**

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3.5 Definitions

* * * * *

Amusement Device. A device which moves persons through a fixed course within a defined area for the purpose of amusement or entertainment and which is not controlled or operated by the rider.

Amusement Ride. A system containing one or more amusement devices that are intended to provide the same general amusement experience.

* * * * *

Area of Sport Activity. That portion of a room or space where the play or practice of a sport occurs.

* * * * *

Boat Launch Ramp. A sloped surface designed for the launching and retrieval of trailered boats to and from the water.

Boat Slip. The area where a boat is tied to a dock or pier for the purpose of embarking or disembarking.

* * * * *

Design High Point. A selected elevation, based on hydrologic data and other appropriate records, which is used as a safe and practical upper limit for the design and construction of a gangway to a floating facility.

* * * * *

Gangway. A variable-sloped structure linking a fixed structure or land with a floating structure.

Golf Car Passage. A continuous passage on which a motorized golf car can operate.

* * * * *

Teeing Ground. In golf, the starting place for the hole to be played.

* * * * *

4.1.1* Application

* * * * *

(b) Accessibility is not required to or in:

* * *

(iv) structures used solely for refereeing a sport.

* * * * *

**4.1.2 Accessible Sites and Exterior
Facilities: New Construction**

* * * * *

(2) * * *

(b) Court Sports. An accessible route complying with 4.3 shall connect both sides of the court in court sports.

Exception: Vertical access is not required to a raised boxing ring.

(3) * * *

Exception: The requirements of 4.4 do not apply to areas of sport activity.

(4) * * *

Exception 1: The requirements of 4.5 do not apply to an area of sport activity.

Exception 2: The requirements for stable, firm, and slip-resistant surfaces do not apply to surfaces in hoofed animal containment areas.

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**4.1.3 Accessible Buildings: New
Construction**

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(12) * * *

(c) Where lockers are provided in accessible spaces, at least 5 percent, but not

less than one, of each type shall comply with 4.25.

(13) * * *

Exception: The requirements of 4.27 do not apply to exercise machines.

* * * * *

(19) * * *

(a) * * *

Exception: In amusement facilities where the motion of fixed seats is an integral part of the amusement experience, transfer seats complying with 15.1.4 shall be permitted.

* * * * *

(c) In addition to the requirements of 4.1.3(19)(a), where a fixed team or player seating area is provided and serves an accessible area of sport activity, the seating area shall contain wheelchair spaces in a number required by 4.1.3(19)(a), but not less than one space. Such wheelchair spaces shall conform to 4.33.2, 4.33.3, 4.33.4, and 4.33.5.

* * * * *

(21) Where a public or common use dressing, fitting, or locker room is provided, the room shall comply with 4.35.

Exception: Where public or common use dressing, fitting, or locker rooms are provided in a cluster, at least 5 percent, but not less than one, of the rooms for each type of use in each cluster shall comply with 4.35.

(22) Where saunas or steam rooms are provided, the rooms shall comply with 4.36.

Exception: Where saunas or steam rooms are provided in a cluster, 5 percent, but not less than one, of the rooms for each type of use in each cluster, shall comply with 4.37.

* * * * *

4.35 Dressing, Fitting, and Locker Rooms

4.35.1 General. Dressing, fitting, and locker rooms required to be accessible by 4.1 shall comply with 4.35 and shall be on an accessible route.

* * * * *

4.35.4 Bench. Accessible dressing rooms, fitting rooms, and locker rooms shall have a bench complying with 4.37.

* * * * *

4.36 Saunas and Steam Rooms

4.36.1 General. Saunas and steam rooms required to be accessible by 4.1 shall comply with 4.36.

4.36.2 Turning Space. A turning space complying with 4.2.3 shall be provided within the room.

Exception: Turning space shall be permitted to be temporarily obstructed by readily removable seats.

4.36.3 Bench. Where provided, at least one bench shall comply with 4.37.

Exception: Clear floor space required by 4.37.1 shall be permitted to be temporarily obstructed by readily removable seats.

4.36.4 Door Swing. Doors shall not swing into any part of the clear floor space required at an accessible bench.

4.37 Benches

4.37.1 Clear Floor or Ground Space. Clear floor or ground space complying with 4.2.4 shall be provided and shall be positioned for parallel approach to an end of the bench seat.

4.37.2 Size. Benches shall have seats that are 20 in (510 mm) minimum to 24 in (610

mm) maximum in depth and 42 in (1065 mm) minimum in length. The bench shall be fixed and shall have back support which is 42 in (1065 mm) minimum in length and extend from a point 2 in (50 mm) maximum above the bench to a point 18 in (455 mm) minimum above the bench.

4.37.3 Height. The bench seat shall be 17 in (430 mm) minimum to 19 in (485 mm) maximum above the floor or ground.

4.37.4 Structural Strength. Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 lbs (1112 N) is applied at any point on the seat, fastener, mounting device, or supporting structure.

4.37.5 Wet Locations. Where installed in wet locations, the surface of the bench shall be slip-resistant and shall not accumulate water.

* * * * *

10.5 Boat and Ferry Docks. Boat and ferry docks shall comply with 15.2.

* * * * *

15 Recreation Facilities

Recreation facilities covered by this section shall comply with the applicable requirements of section 4 and the special application sections, except as modified or otherwise provided in this section.

Amusement Rides

15.1 General. Amusement rides with amusement devices containing fixed seats shall comply with 15.1.

15.1.1 Number Required. One wheelchair space complying with 15.1.3 shall be provided per 100 fixed seats or fraction thereof on each amusement ride. In addition, one transfer seat complying with 15.1.4 shall be provided per 100 fixed seats or fraction thereof on each amusement ride.

Exception: Where it is not operationally or structurally feasible to provide wheelchair spaces, two transfer seats complying with 15.1.4 shall be provided per 100 fixed seats or fraction thereof on each amusement ride.

15.1.1.1 Dispersion. Accessible amusement devices shall be dispersed throughout the amusement ride. Where different types of amusement devices are provided on an amusement ride, the accessible amusement devices shall be dispersed among the different types. This provision does not require an increase in the minimum number of amusement devices required to be accessible.

15.1.2 Accessible Loading and Unloading Areas. An accessible route shall connect the portion of the loading and unloading area serving each accessible amusement device. The loading and unloading area serving each accessible amusement device shall provide a maneuvering space complying with 4.2.3. The maneuvering space shall have a slope not steeper than 1:48.

15.1.2.1 Wheelchair Storage Space. A wheelchair storage space complying with 4.2.4 shall be provided in the unloading area for each required transfer seat. Wheelchair storage spaces shall not overlap any required means of egress or accessible route.

15.1.2.2 Signage. Signage shall be provided at the entrance of the queue or waiting line for each amusement ride to

identify whether the accessible amusement devices provide wheelchair spaces, transfer seats, or both. Where an accessible unload area also serves as the accessible load area, signage shall be provided at the entrance to the queue or waiting line indicating the location of the accessible load and unload area.

15.1.2.3 Loading and Unloading. When an accessible amusement device is positioned for loading or unloading, the height of the loading or unloading area shall be coordinated with the floor height of the amusement device so that, when the device is at rest, the vertical difference shall be within plus or minus $\frac{5}{8}$ in (16 mm) under normal passenger load conditions and the horizontal gap shall be no greater than 3 in (75 mm).

Exception: Where it is not operationally or structurally feasible to meet the horizontal or vertical difference requirements, ramps, bridge plates, or similar manually deployed devices complying with the applicable requirements of 36 CFR 1192.83 shall be provided.

15.1.3 Wheelchair Space. Accessible amusement devices designed to provide wheelchair spaces shall comply with 15.1.3.

15.1.3.1 Floor or Ground Surface. The floor or ground surface of wheelchair spaces shall have a slope not steeper than 1:48 and shall comply with 4.5.1, 4.5.3, and 4.5.4. Changes in level are not permitted.

15.1.3.2 Width. A wheelchair space shall be 36 in (915 mm) minimum in width.

15.1.3.3 Depth. Where a wheelchair space can be entered from the front or rear, the wheelchair space shall be 48 in (1220 mm) minimum in depth. Where a wheelchair space can be entered only from the side, the wheelchair space shall be 60 in (1525 mm) minimum in depth.

15.1.3.4 Approach. One side of the wheelchair space shall adjoin an accessible route.

15.1.3.5 Fixed Companion Seats. Where amusement devices provide seating for more than one rider, a fixed companion seat shall be provided for each required wheelchair space. Where amusement devices provide shoulder-to-shoulder seating, companion seats shall be shoulder-to-shoulder with the adjacent wheelchair space.

15.1.4 Transfer Seat. Accessible amusement devices designed to provide transfer seats shall comply with 15.1.4 when positioned for loading and unloading.

15.1.4.1 Clear Floor Space. Clear floor space complying with 4.2.4.1 shall be provided with the longer dimension parallel to the unobstructed side of the transfer seat and shall be located within 3 in (75 mm) maximum from the transfer seat. Clear floor space shall extend 12 in (305 mm) beyond the back of the seat (see Fig. 58).

15.1.4.2 Maneuvering Space. The maneuvering space required by 15.1.2 is permitted to overlap the clear floor space serving transfer seats.

15.1.4.3 Transfer Seat Dimensions and Position. The height of the transfer seat shall be 17 in (430 mm) minimum to 19 in (485 mm) maximum above the load and unload platform. The end of the transfer seat adjacent to the clear floor space complying

with 15.1.4.1 shall be unobstructed when in the load and unload position (see Fig. 59).

15.1.4.4 Transfer Entry. When in the load and unload position the amusement device shall provide a 36 in (915 mm) wide minimum entry. The entry shall provide an opening and shall be positioned parallel and adjacent to the longer dimension of the clear floor space (see Fig. 60).

Boating Facilities

15.2 Boating Facilities. Boating facilities shall comply with 15.2.

15.2.1 Gangways. Gangways which are part of an accessible route shall comply with 4.3. Gangways shall be permitted to have transition plates at the top and bottom.

Exception 1. The maximum rise specified by 4.8.2 shall not apply to gangways.

Exception 2. Gangways shall be permitted to exceed the maximum slope specified by 4.8.2 when the distance in feet between the design high point and the level of the water, and the square footage of fixed and floating piers at the facility are in accordance with Table 15.2.1.

Exception 3. Handrail extensions shall not be required on gangways or landings where they connect to transition plates and shall not be required on transition plates.

TABLE 15.2.1.—CONDITIONS WHEN GANGWAY MAY EXCEED 1:12 MAXIMUM SLOPE

Distance in feet between design high point and water level is over	And square footage of fixed and floating piers at the facility is less than
2.5	3,000
5.0	10,000
10.0	20,000
12.5	30,000
30.0	95,000

15.2.2 Slips: Minimum Number. Where boat slips are provided, at least 3 percent, but not less than one, shall comply with 15.2.3. Accessible boat slips shall be dispersed throughout the various types provided. This provision does not require an increase in the minimum number of boat slips required to be accessible. Where the number of slips cannot be identified, each 40 feet (12.2 m) of mooring space provided along the perimeter of a pier, shall be counted as one boat slip for the purpose of this section.

15.2.2.1 Slips Serving Boat Launch Ramps. In addition to the requirements of 15.2.2, where boat launch ramps are provided with boarding piers, at least one accessible slip complying with 15.2.3 shall be provided adjacent to a boat launch ramp.

15.2.2.2 Location. Among each type provided, accessible slips shall be those nearest to amenities provided in the boating facility.

15.2.3 Accessible Boat Slips. Accessible boat slips shall comply with 15.2.3.

15.2.3.1 Pier Clearances. Accessible boat slips shall be served by clear pier space 60 in (1525 mm) wide minimum and at least as long as the accessible slip (see Fig. 61). Every

120 in (3050 mm) maximum of linear pier edge serving the accessible boat slip shall contain at least one continuous clear opening 60 in (1525 mm) minimum (see Fig. 62).

Fishing Piers and Platforms

15.3 Fishing Piers and Platforms. Each fishing pier and platform shall comply with 15.3.

15.3.1 Accessible Route. When an accessible route connects a floating fishing pier or a floating fishing platform, the requirements of 15.2.1 shall apply.

15.3.2 Railings. Where railings, guardrails, or handrails are provided, they shall comply with 15.3.2.

15.3.2.1 Edge Protection. Edge protection shall be provided and shall extend 2 in (50 mm) minimum above the ground or deck surface.

15.3.2.2 Height. At least 25 percent of the railings shall be 32 in (815 mm) maximum above the ground or deck surface.

15.3.2.3 Dispersion. Railings required to comply with 15.3.2.2 shall be dispersed throughout a fishing facility.

15.3.3 Clear Pier or Platform Space. At least one clear space complying 4.2.4.1 shall be provided where the railing height required by 15.3.2.2 is located. Where no railings are provided, at least one clear space complying with 4.2.4.1 shall be provided on the fishing pier or fishing platform.

15.3.4 Maneuvering Space. At least one maneuvering space complying with 4.2.3 shall be provided on the fishing pier or fishing platform.

Golf

15.4 General. Golf courses, driving ranges, and practice putting greens shall comply with 15.4.

15.4.1 Accessible Route. The accessible route required by 4.1.2(2) shall be 48 in (1220 mm) minimum wide where located within the boundary of a golf course and shall connect to the bag drop areas, accessible teeing grounds, and putting greens. Where handrails are required, the accessible route shall be 60 in (1525 mm) minimum wide.

Exception 1: A golf car passage complying with 15.4.5 shall be permitted in lieu of all or part of an accessible route within the boundary of the golf course.

Exception 2: The requirements of 4.8.5 do not apply to an accessible route located within the boundary of a golf course.

15.4.2 Teeing Grounds. Where one teeing ground is provided for a hole, the teeing ground shall comply with 15.4.7. Where two or more teeing grounds are provided for a hole, at least two teeing grounds serving the hole shall comply with 15.4.7.

15.4.3 Driving Ranges and Practice Tees. Where driving ranges or practice tees are provided, at least 5 percent of the practice tees, but not less than one, shall comply with 15.4.7.

15.4.4 Weather Shelters. Where weather shelters are provided on a golf course, each weather shelter shall have a clear floor or ground space 60 in (1525 mm) minimum by 96 in (2440 mm) minimum and shall be designed and constructed so that a golf car can enter and exit in a forward direction.

15.4.5 Golf Car Passage. Where curbs or other manmade barriers are provided along a

golf car passage to prohibit a golf car from entering a fairway, openings at least 60 in (1525 mm) wide shall be provided at intervals of 75 yds (69 m).

15.4.5.1 Width. The golf car passage shall be 48 in (1220 mm) minimum wide.

15.4.6 Putting Greens. Putting greens shall be designed and constructed so that a golf car can enter, maneuver within, and exit the putting green.

15.4.7 Teeing Grounds. Accessible teeing grounds shall have a minimum clear area of 10 ft by 10 ft (3050 mm by 3050 mm) with a surface slope which does not exceed 1:48 in all directions, and shall be designed and constructed so that a golf car can enter in a forward direction and maneuver in the teeing ground.

Miniature Golf

15.5 Miniature Golf Courses. Each hole on a miniature golf course shall comply with 15.5.

Exception: Where elevated holes are provided, at least 50 percent of elevated holes shall comply with 15.5.

15.5.1 Accessible Route. An accessible route shall connect start of play areas on each accessible hole.

Exception 1: Readily removable curbs are permitted where the accessible route intersects the playing surface of a hole.

Exception 2: Where the accessible route is located on the playing surface of a hole, a maximum slope of 1:4 is permitted for a 4 in (100 mm) maximum rise.

Exception 3: The requirements of 4.8.5 do not apply to an accessible route located on a hole.

15.5.2 Start of Play Areas. An accessible start of play area shall have a slope not steeper than 1:48 and shall be 60 in (1525 mm) minimum by 60 in (1525 mm) minimum.

15.5.3 Golf Club Reach Range. All level areas within accessible holes where golf balls rest shall be within 27 in (560 mm) maximum of an accessible route with a maximum slope of 1:20 (see Fig. 63).

Play Areas

15.6 Play Areas [Reserved]

Sports Facilities

15.7.1 Exercise Equipment and Machines. At least one of each type of exercise equipment and machines shall be provided with clear floor space complying with 4.2.4 and shall be served by an accessible route. Clear floor space shall be positioned for transfer or for use by an individual seated in a wheelchair.

15.7.2 Bowling Lanes. Where bowling lanes are provided, at least 5 percent, but not less than one lane of each type, shall be accessible.

15.7.3 Shooting Facilities. Where fixed firing positions are provided at a site, at least 5 percent, but not less than one, of each type of fixed firing position, shall comply with 15.7.3.1. Factors to be considered in determining the types of fixed firing positions include the price of admission, if covering and lighting is provided, and the shooting events the fixed firing position intends to support.

15.7.3.1 Fixed Firing Position. An accessible fixed firing position shall contain a turning circle complying with 4.2.3 and shall have a slope not steeper than 1:48 in all directions.

Swimming Pools, Wading Pools, and Spas

15.8.1 Swimming Pools. At least two accessible means of entry shall be provided for each public and common use swimming pool. The primary means of entry shall comply with 15.8.4 (Swimming Pool Lifts) or 15.8.5 (Sloped Entries). The secondary means of entry shall not duplicate the primary means and shall comply with one of the following: 15.8.4 (Swimming Pool Lifts), 15.8.5 (Sloped Entries), 15.8.6 (Transfer Walls), 15.8.7 (Transfer Systems), 15.8.8 (Pool Stairs), or 15.8.9 (Moveable Floors).

Exception: Where a swimming pool has less than 300 linear feet of swimming pool wall, at least one accessible means of entry shall be provided and shall comply with 15.8.4 (Swimming Pool Lifts) or 15.8.5 (Sloped Entries).

15.8.2 Wading Pools. At least one accessible means of entry complying with 15.8.5 (Sloped Entries), 15.8.6 (Transfer Walls), or 15.8.7 (Transfer Systems), shall be provided for each wading pool.

15.8.3 Spas. At least one accessible means of entry complying with 15.8.4 (Swimming Pool Lifts), 15.8.6 (Transfer Walls), or 15.8.7 (Transfer Systems) shall be provided for each spa.

Exception: Where spas are provided in a cluster, 5 percent, but not less than one in each cluster, shall be accessible.

15.8.4 Swimming Pool Lifts. Swimming pool lifts shall comply with 15.8.4.

15.8.4.1 Seat Location. In the raised position, the centerline of the seat shall be located over the deck and 20 in (510 mm) minimum from the edge of the pool.

15.8.4.2 Clear Deck Space. On the side of the seat opposite the water, a clear deck space shall be provided parallel with the seat. The space shall have a width of 30 in (760 mm) minimum and shall extend forward 48 in (1220 mm) minimum from a line located 12 in (305 mm) behind the intersection of the seat and its back (see Fig. 75).

15.8.4.3 Seat Height. The height of the lift seat shall be 16 in (405 mm) minimum to 18 in (455 mm) maximum measured from the deck to the top of the seat surface when in the raised (load) position (see Fig. 76(a)).

15.8.4.4 Seat Width. The seat shall be 16 in (405 mm) minimum wide.

15.8.4.5 Footrests and Armrests. Footrests shall be provided and shall move with the seat. If provided, armrests positioned opposite the water shall be removable or shall fold clear of the seat when the seat is in the raised (load) position.

15.8.4.6 Operation. The lift shall be capable of unassisted operation from both the deck and water levels. Controls and operating mechanisms shall be unobstructed when the lift is in use. Controls and operating mechanisms shall comply with 4.27.4 and shall not require continuous manual pressure for operation.

15.8.4.7 Submerged Depth. The lift shall be designed so that the seat will submerge to

a water depth of 18 in (455 mm) minimum (see Fig. 76(b)).

15.8.4.8 Lifting Capacity. Single person pool lifts shall have a minimum weight capacity of 300 lbs (136 kg). Lifts shall be capable of sustaining a static load of at least three times the rated load.

15.8.5 Sloped Entries. Sloped entries shall comply with 15.8.5.

15.8.5.1 Sloped Entries. Sloped entries designed to provide access into the water shall comply with 4.3, except as modified below.

15.8.5.2 Submerged Depth. Where sloped entries are designed to provide access into the water, they shall extend to a depth of 24 in (610 mm) minimum to 30 in (760 mm) maximum below the stationary water level. Where landings are required by 4.8, at least one landing shall be located 24 in (610 mm) minimum to 30 in (760 mm) maximum below the stationary water level (see Fig. 77).

Exception: In wading pools, the sloped entry and landings, if provided, shall extend to the deepest part of the wading pool.

15.8.5.3 Handrails. Handrails shall be provided on both sides of the sloped entry. The clear width between handrails shall be 33 in (840 mm) minimum and 38 in (965 mm) maximum. Handrail extensions required by 4.8.5 shall not be required at the bottom landing serving a pool ramp (see Fig. 78).

15.8.6 Transfer Walls. Transfer walls shall comply with 15.8.6.

15.8.6.1 Clear Deck Space. A clear deck space of 60 in (1525 mm) minimum by 60 in (1525 mm) minimum with a slope not steeper than 1:48 shall be provided at the base of the transfer wall. Where one grab bar is provided, the clear deck space shall be centered on the grab bar. Where two grab bars are provided, the clear deck space shall be centered on the clearance between the grab bar (see Fig. 79).

15.8.6.2 Height. The height of the transfer wall shall be 16 in (405 mm) minimum to 18 in (455 mm) maximum measured from the deck (see Fig. 80).

15.8.6.3 Wall Depth. The depth of the transfer wall shall be 12 in (305 mm) minimum to 16 in (405 mm) maximum.

15.8.6.4 Surface. The surface of the transfer wall shall not have sharp edges.

15.8.6.5 Grab Bars. At least one grab bar shall be provided on the transfer wall. Grab bars shall be perpendicular to the pool wall and shall extend the full depth of the wall. The top of the gripping surface shall be 4 in (100 mm) maximum above walls. Where two grab bars are provided, clearance between grab bars shall be 22 in (560 mm) minimum. Where one grab bar is provided, clearance shall be 22 in (560 mm) minimum on both sides of the grab bar. Grab bars shall comply with 4.26.

15.8.7 Transfer Systems. Transfer systems shall comply with 15.8.7.

15.8.7.1 Transfer Platform. A transfer platform 19 in (485 mm) minimum deep by 22 in (560 mm) minimum wide shall be provided at the head of each transfer system.

15.8.7.2 Clear Deck Space. A clear deck space of 60 in (1525 mm) minimum by 60 in (1525 mm) minimum with a slope not steeper than 1:48 shall be provided at the base of the transfer platform surface and shall be centered along a 22 in (560 mm) minimum unobstructed side of the transfer platform (see Fig. 81).

15.8.7.3 Height. The height of the transfer platform shall comply with 15.8.6.2.

15.8.7.4 Transfer Step Risers. Transfer step riser height shall be 7 in (180 mm) maximum. Transfer step risers shall extend to a water depth of 18 in (455 mm) minimum (see Fig. 82).

15.8.7.5 Surface. The surface of the transfer system shall not have sharp edges.

15.8.7.6 Size. Each transfer step shall have a tread depth of 12 in (305 mm) minimum and 17 in (430 mm) maximum and shall have a tread width of 22 in (560 mm) minimum.

15.8.7.7 Grab Bars. One grab bar shall be provided on each step. The grab bar at the transfer platform shall not obstruct transfer. The top of the gripping surface shall be 4 in (100 mm) maximum above each step. Grab bars shall comply with 4.26.

15.8.8 Pool Stairs. Pool stairs shall comply with 15.8.8.

15.8.8.1 Pool Stairs. Pool stairs shall comply with 4.9, except as modified below.

15.8.8.2 Handrails. The width between handrails shall be 20 in (510 mm) minimum and 22 in (560 mm) maximum. Handrail extensions required by 4.9.4 shall not be required at the bottom landing serving a pool stair.

15.8.9 Moveable Floors. The pool coping shall comply with 4.5.2 where the moveable floor connects with the pool deck.

* * * * *

3. The following figures indicated in the left hand column will be added following the sections in Appendix A indicated in the right hand column:

Figure	Section
58	15.1.4.1.
59	15.1.4.3.
60	15.1.4.4.
61	15.2.3.1.
62	15.2.3.1.
63	15.5.3.
64	[Reserved].
65	[Reserved].
66	[Reserved].
67	[Reserved].
68	[Reserved].
69	[Reserved].
70	[Reserved].
71	[Reserved].
72	[Reserved].
73	[Reserved].
74	[Reserved].
75	15.8.4.2.
76	15.8.4.3.
77	15.8.5.2.
78	15.8.5.3.
79	15.8.6.1.
80	15.8.6.2.
81	15.8.7.2.
82	15.8.7.4.

Figures 58 to 63 and 75 to 82 read as follows:

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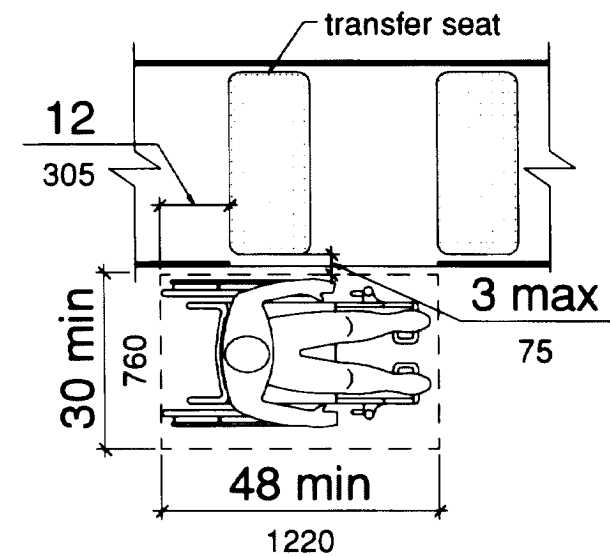


Fig. 58

Clear Floor Space at Transfer Seats

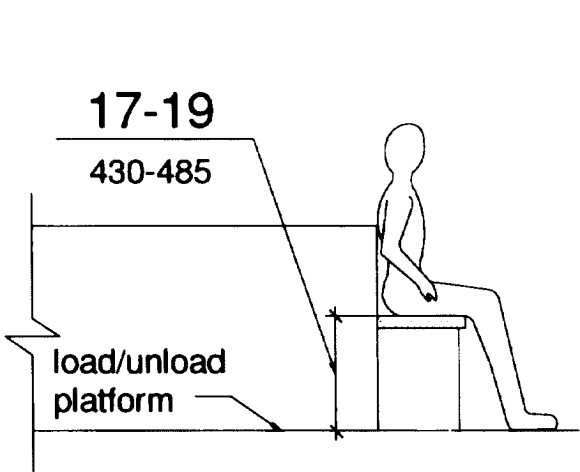


Fig. 59

Transfer Seat Height

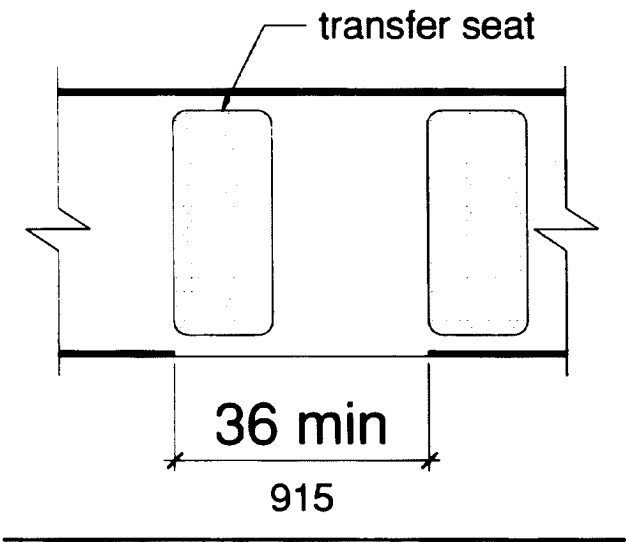
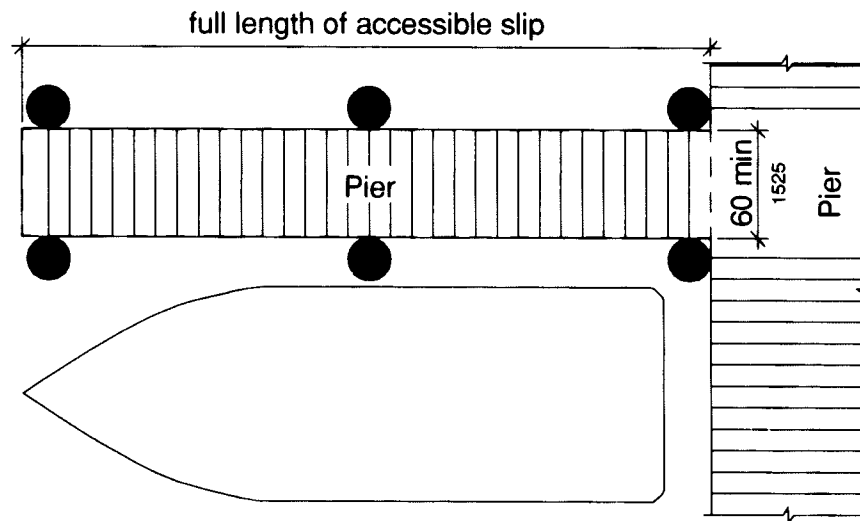
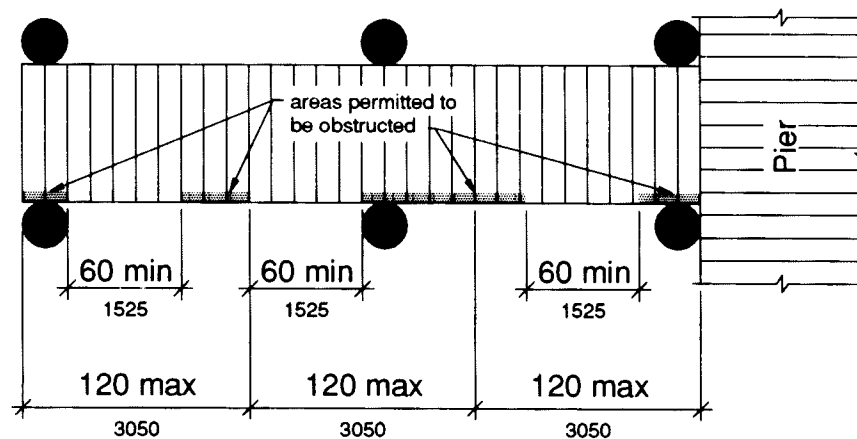


Fig. 60

Transfer Seat Entry

**Fig. 61****Clear Space at Pier****Fig. 62****Pier Clear Opening**

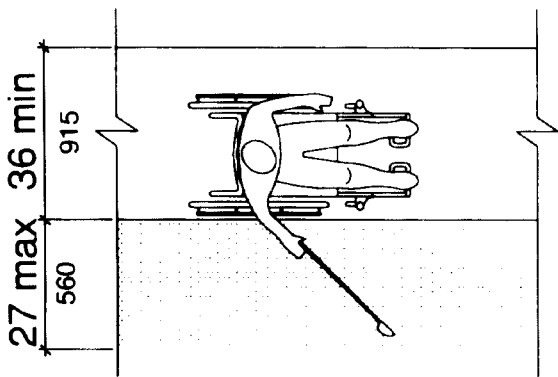


Fig. 63

Golf Club Reach Range

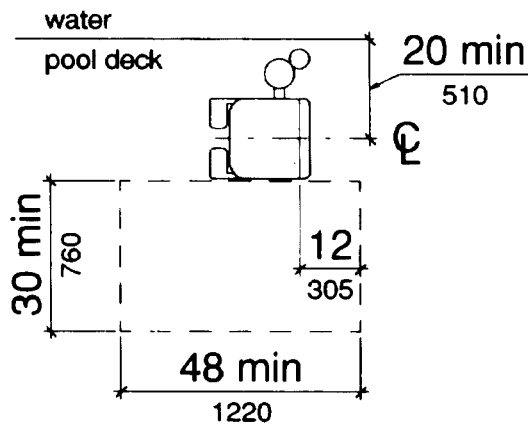


Fig. 75

Clear Deck Space at Pool Lift

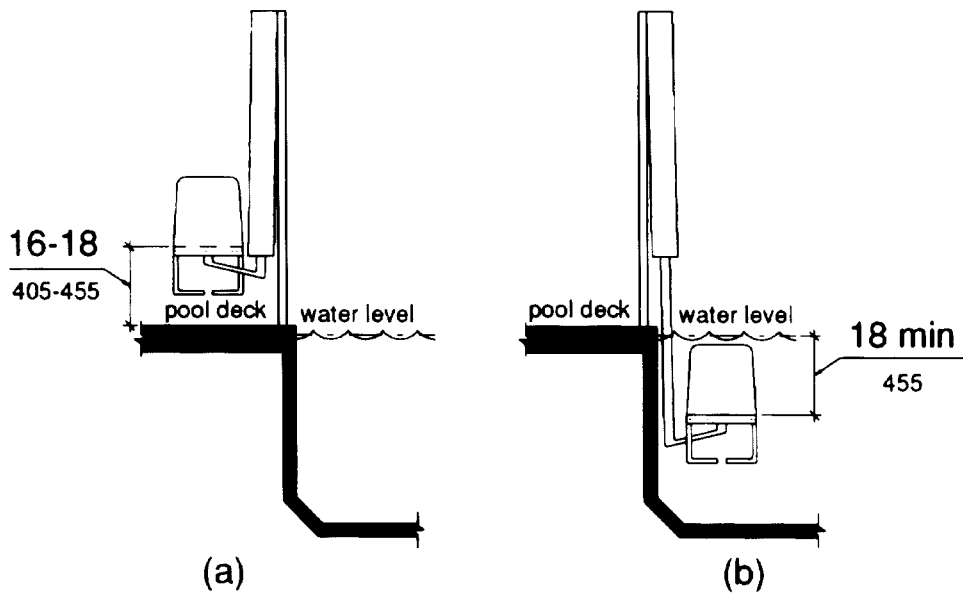


Fig. 76

Height and Submerged Depth of Pool Lifts

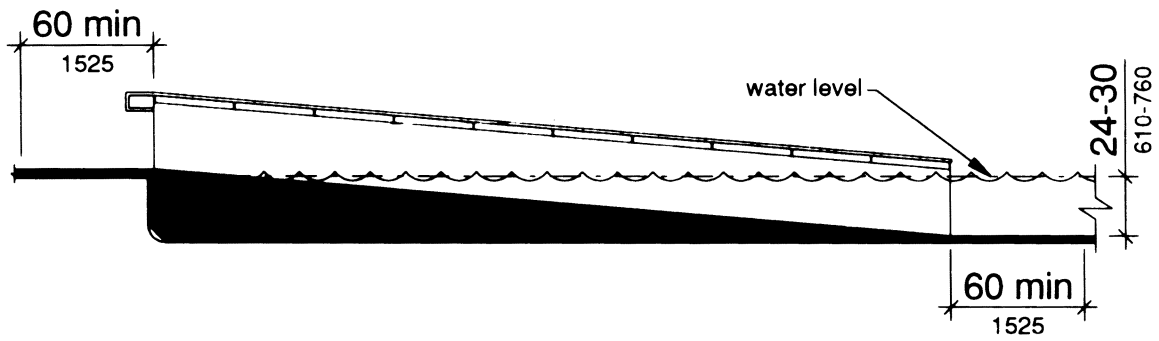


Fig. 77

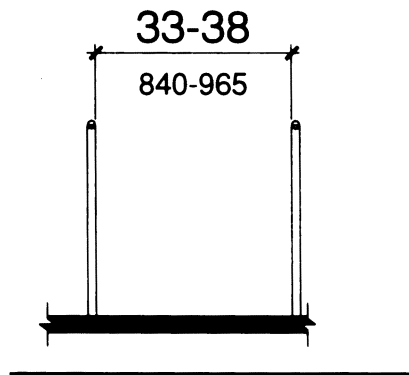
Sloped Entries

Fig. 78

Sloped Entry Handrails

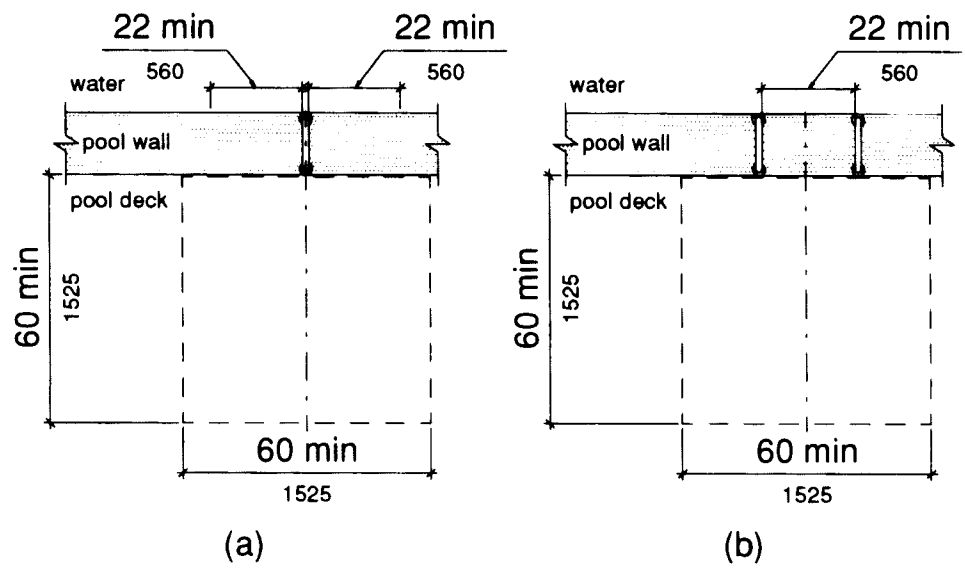


Fig. 79

Clear Deck Space at Transfer Walls

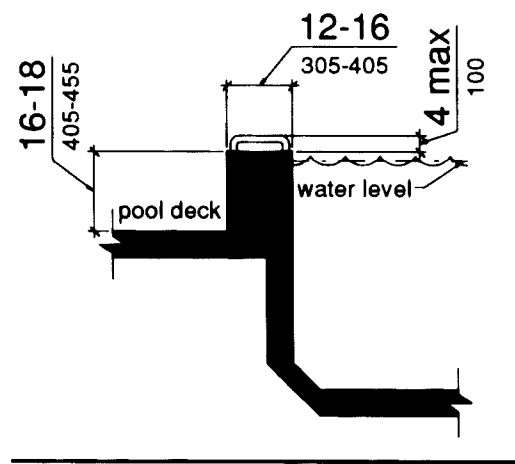


Fig. 80

Transfer Walls

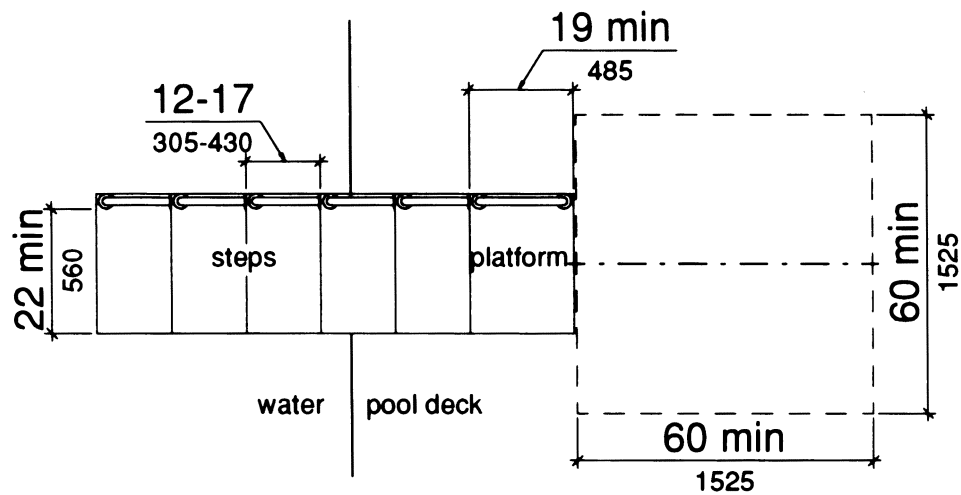


Fig. 81

Clear Deck Space at Transfer Systems

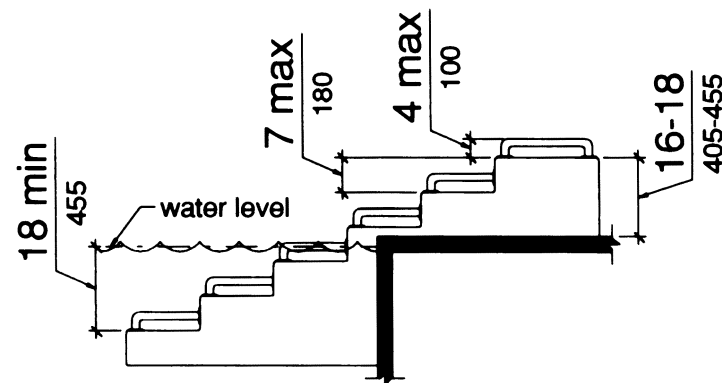


Fig. 82

Transfer Systems